Mathematica 11.3 Integration Test Results

Test results for the 700 problems in "4.3.1.2 (d sec)^m (a+b tan)^n.m"

Problem 11: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]^7\,(a+i\,a\,\text{Tan}[c+d\,x])\,dx$$

Optimal (type 3, 98 leaves, 5 steps):

$$\frac{5\,a\,\text{ArcTanh}[\text{Sin}[c+d\,x]]}{16\,d}+\frac{i\,a\,\text{Sec}[c+d\,x]^7}{7\,d}+\frac{5\,a\,\text{Sec}[c+d\,x]\,\text{Tan}[c+d\,x]}{16\,d}+\frac{5\,a\,\text{Sec}[c+d\,x]^3\,\text{Tan}[c+d\,x]}{24\,d}+\frac{a\,\text{Sec}[c+d\,x]^5\,\text{Tan}[c+d\,x]}{6\,d}$$

Result (type 3, 273 leaves):

$$-\frac{5\,a\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]}{16\,d}+\frac{5\,a\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]}{16\,d}+\frac{i\,a\,\text{Sec}[c+d\,x]^7}{7\,d}+\frac{a}{48\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6}+\frac{a}{16\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^4}+\frac{5\,a}{32\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^2}-\frac{a}{48\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6}-\frac{a}{16\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^4}-\frac{5\,a}{32\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^2}$$

Problem 12: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]^5\,(a+i\,a\,\text{Tan}[c+d\,x])\,dx$$

Optimal (type 3, 76 leaves, 4 steps):

$$\frac{3\,a\,\text{ArcTanh}[\text{Sin}[c+d\,x]]}{8\,d}+\frac{i\,a\,\text{Sec}[c+d\,x]^5}{5\,d}+\frac{3\,a\,\text{Sec}[c+d\,x]\,\text{Tan}[c+d\,x]}{8\,d}+\frac{a\,\text{Sec}[c+d\,x]^3\,\text{Tan}[c+d\,x]}{4\,d}$$

Result (type 3, 209 leaves):

$$-\frac{3\,a\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]}{8\,d}+\frac{3\,a\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]}{8\,d}+\frac{i\,a\,\text{Sec}[c+d\,x]^5}{5\,d}+\frac{a}{16\,d\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4}+\frac{3\,a}{16\,d\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}-\frac{a}{16\,d\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4}-\frac{3\,a}{16\,d\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}$$

Problem 13: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]^3\,(a+i\,a\,\text{Tan}[c+d\,x])\,dx$$

Optimal (type 3, 54 leaves, 3 steps):

$$\frac{a\,\text{ArcTanh}[\text{Sin}[c+d\,x]]}{2\,d}+\frac{i\,a\,\text{Sec}[c+d\,x]^3}{3\,d}+\frac{a\,\text{Sec}[c+d\,x]\,\text{Tan}[c+d\,x]}{2\,d}$$

Result (type 3, 145 leaves):

$$-\frac{a\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]}{2\,d}+\frac{a\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]}{2\,d}+\frac{i\,a\,\text{Sec}[c+d\,x]^3}{3\,d}+\frac{a}{4\,d\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}-\frac{a}{4\,d\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}$$

Problem 14: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]\,(a+i\,a\,\text{Tan}[c+d\,x])\,dx$$

Optimal (type 3, 27 leaves, 2 steps):

$$\frac{a\,\text{ArcTanh}[\text{Sin}[c+d\,x]]}{d}+\frac{i\,a\,\text{Sec}[c+d\,x]}{d}$$

Result (type 3, 84 leaves):

$$-\frac{a\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]}{d}+\frac{a\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]}{d}+\frac{i\,a\,\text{Sec}[c+d\,x]}{d}$$

Problem 22: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]^2\,(a+i\,a\,\text{Tan}[c+d\,x])^2\,dx$$

Optimal (type 3, 27 leaves, 2 steps):

$$-\frac{i\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^3}{3\,a\,d}$$

Result (type 3, 68 leaves):

$$\frac{1}{6\,d}a^2\,\mathrm{Sec}[c]\,\mathrm{Sec}[c+d\,x]^3\,(3\,i\,\mathrm{Cos}[d\,x]+3\,i\,\mathrm{Cos}[2\,c+d\,x]+3\,\mathrm{Sin}[d\,x]-3\,\mathrm{Sin}[2\,c+d\,x]+2\,\mathrm{Sin}[2\,c+3\,d\,x])$$

Problem 23: Result more than twice size of optimal antiderivative.

$$\int (a+i\,a\,\mathrm{Tan}[c+d\,x])^2\,dx$$

Optimal (type 3, 38 leaves, 2 steps):

$$2\,a^2\,x-\frac{2\,i\,a^2\,\mathrm{Log}[\mathrm{Cos}[c+d\,x]]}{d}-\frac{a^2\,\mathrm{Tan}[c+d\,x]}{d}$$

Result (type 3, 100 leaves):

$$-\frac{1}{2\,d}a^2\,\mathrm{Sec}[c]\,\mathrm{Sec}[c+d\,x]\,(4\,\mathrm{ArcTan}[\mathrm{Tan}[3\,c+d\,x]]\,\mathrm{Cos}[c]\,\mathrm{Cos}[c+d\,x]-4\,d\,x\,\mathrm{Cos}[2\,c+d\,x]+\mathrm{Cos}[d\,x]\,(-4\,d\,x+i\,\mathrm{Log}[\mathrm{Cos}[c+d\,x]^2])+i\,\mathrm{Cos}[2\,c+d\,x]\,\mathrm{Log}[\mathrm{Cos}[c+d\,x]^2]+2\,\mathrm{Sin}[d\,x])$$

Problem 29: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Sec}[c+d\,x]^3\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^2\,dx$$

Optimal (type 3, 94 leaves, 4 steps):

$$\frac{5\,a^2\,\mathrm{ArcTanh}[\mathrm{Sin}[c+d\,x]]}{8\,d}+\frac{5\,i\,a^2\,\mathrm{Sec}[c+d\,x]^3}{12\,d}+\frac{5\,a^2\,\mathrm{Sec}[c+d\,x]\,\mathrm{Tan}[c+d\,x]}{8\,d}+\frac{i\,\mathrm{Sec}[c+d\,x]^3\,(a^2+i\,a^2\,\mathrm{Tan}[c+d\,x])}{4\,d}$$

Result (type 3, 215 leaves):

$$\frac{1}{192\,d}a^2\,\mathrm{Sec}[c+d\,x]^4\,\Big(128\,i\,\mathrm{Cos}[c+d\,x]-45\,\mathrm{Log}\big[\mathrm{Cos}[\tfrac{1}{2}(c+d\,x)]-\mathrm{Sin}[\tfrac{1}{2}(c+d\,x)]\big]-60\,\mathrm{Cos}[2\,(c+d\,x)]\,\Big(\mathrm{Log}\big[\mathrm{Cos}[\tfrac{1}{2}(c+d\,x)]-\mathrm{Sin}[\tfrac{1}{2}(c+d\,x)]\big]-\mathrm{Log}\big[\mathrm{Cos}[\tfrac{1}{2}(c+d\,x)]+\mathrm{Sin}[\tfrac{1}{2}(c+d\,x)]\big]\Big)-15\,\mathrm{Cos}[4\,(c+d\,x)]\,\Big(\mathrm{Log}\big[\mathrm{Cos}[\tfrac{1}{2}(c+d\,x)]-\mathrm{Sin}[\tfrac{1}{2}(c+d\,x)]\big]-\mathrm{Log}\big[\mathrm{Cos}[\tfrac{1}{2}(c+d\,x)]+\mathrm{Sin}[\tfrac{1}{2}(c+d\,x)]\big]\Big)+45\,\mathrm{Log}\big[\mathrm{Cos}[\tfrac{1}{2}(c+d\,x)]+\mathrm{Sin}[\tfrac{1}{2}(c+d\,x)]\big]-18\,\mathrm{Sin}[c+d\,x]+30\,\mathrm{Sin}[3\,(c+d\,x)]\Big)$$

Problem 30: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Sec}[c+d\,x]\,\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^2\,dx$$

Optimal (type 3, 68 leaves, 3 steps):

$$\frac{3\,a^2\,\mathrm{ArcTanh}[\mathrm{Sin}[c+d\,x]]}{2\,d}+\frac{3\,\mathrm{i}\,a^2\,\mathrm{Sec}[c+d\,x]}{2\,d}+\frac{\mathrm{i}\,\mathrm{Sec}[c+d\,x]\,\left(a^2+\mathrm{i}\,a^2\,\mathrm{Tan}[c+d\,x]\right)}{2\,d}$$

Result (type 3, 146 leaves):

$$-\frac{1}{4\,d}a^2\,\mathrm{Sec}[c+d\,x]^2\left(-8\,\mathrm{i}\,\mathrm{Cos}[c+d\,x]+3\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]+3\,\mathrm{Cos}[2\,(c+d\,x)]\left(\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]-\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]\right)-3\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]+2\,\mathrm{Sin}[c+d\,x]\right)$$

Problem 31: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Cos}[c+d\,x]\,\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^2\,dx$$

Optimal (type 3, 46 leaves, 2 steps):

$$-\frac{a^2\,\mathrm{ArcTanh}[\mathrm{Sin}[c+d\,x]]}{d}-\frac{2\,\mathrm{i}\,\mathrm{Cos}[c+d\,x]\,\left(a^2+\mathrm{i}\,a^2\,\mathrm{Tan}[c+d\,x]\right)}{d}$$

Result (type 3, 180 leaves):

$$\left(a^2\left(\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]\left(-2\,\mathrm{i}+\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]-\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]\right)+\left(2-\mathrm{i}\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]+\mathrm{i}\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]\right)\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)\left(\mathrm{Cos}\left[\frac{1}{2}(c+5\,d\,x)\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{1}{2}(c+5\,d\,x)\right]\right)\right)\Big/\left(d\,\left(\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]\right)^2\right)$$

Problem 39: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Sec}[c+d\,x]^2\,\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^3\,dx$$

Optimal (type 3, 27 leaves, 2 steps):

$$-\frac{i\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^4}{4\,a\,d}$$

Result (type 3, 84 leaves):

$$\frac{1}{4\,d}a^3\,\mathrm{Sec}[c]\,\mathrm{Sec}[c+d\,x]^4\,(3\,i\,\mathrm{Cos}[c]+2\,i\,\mathrm{Cos}[c+2\,d\,x]+2\,i\,\mathrm{Cos}[3\,c+2\,d\,x]-3\,\mathrm{Sin}[c]+2\,\mathrm{Sin}[c+2\,d\,x]-2\,\mathrm{Sin}[3\,c+2\,d\,x]+\mathrm{Sin}[3\,c+4\,d\,x])$$

Problem 41: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Cos}[c+d\,x]^2\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^3\,dx$$

Optimal (type 3, 49 leaves, 3 steps):

$$-a^3\,x+\frac{i\,a^3\,\mathrm{Log}[\mathrm{Cos}[c+d\,x]]}{d}-\frac{2\,i\,a^4}{d\,(a-i\,a\,\mathrm{Tan}[c+d\,x])}$$

Result (type 3, 99 leaves):

$$-\Big(\Big(a^3\,\big(\mathrm{Cos}[c+d\,x]\,\big(2\,i+2\,d\,x-i\,\mathrm{Log}\big[\mathrm{Cos}[c+d\,x]^2\big]\big)+\big(-2-2\,i\,d\,x-\mathrm{Log}\big[\mathrm{Cos}[c+d\,x]^2\big]\big)\,\mathrm{Sin}[c+d\,x]\big)\,(\mathrm{Cos}[c+4\,d\,x]+i\,\mathrm{Sin}[c+4\,d\,x])\Big)\Big/\Big(2\,d\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^3\Big)\Big)$$

Problem 47: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Cos}[c+d\,x]\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^3\,dx$$

Optimal (type 3, 61 leaves, 3 steps):

$$-\frac{3\,a^3\,\mathrm{ArcTanh}[\mathrm{Sin}[c+d\,x]]}{d}-\frac{3\,i\,a^3\,\mathrm{Sec}[c+d\,x]}{d}-\frac{2\,i\,a\,\mathrm{Cos}[c+d\,x]\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^2}{d}$$

Result (type 3, 123 leaves):

$$\Big(a^3\,\mathrm{Cos}[c+d\,x]^2\,\Big(6\,\mathrm{ArcTanh}\Big[\mathrm{Sin}[c]+\mathrm{Cos}[c]\,\mathrm{Tan}\Big[\frac{d\,x}{2}\Big]\Big]\,\mathrm{Cos}[c+d\,x]\,(i\,\mathrm{Cos}[3\,c]+\mathrm{Sin}[3\,c])+(-\mathrm{Cos}[2\,c-d\,x]+i\,\mathrm{Sin}[2\,c-d\,x])\,(5\,\mathrm{Cos}[c+d\,x]-i\,\mathrm{Sin}[c+d\,x])\Big)\,(-i+\mathrm{Tan}[c+d\,x])^3\Big)\Big/\Big(d\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^3\Big)$$

Problem 54: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Cos}[c+d\,x]\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^4\,dx$$

Optimal (type 3, 97 leaves, 4 steps):

$$-\frac{15 a^4 \operatorname{ArcTanh}[\operatorname{Sin}[c+d x]]}{2 d}-\frac{15 i a^4 \operatorname{Sec}[c+d x]}{2 d}-\frac{2 i a \operatorname{Cos}[c+d x]\left(a+i a \operatorname{Tan}[c+d x]\right)^3}{d}-\frac{5 i \operatorname{Sec}[c+d x]\left(a^4+i a^4 \operatorname{Tan}[c+d x]\right)}{2 d}$$

Result (type 3, 906 leaves):

$$\left(15 \operatorname{Cos}[4 c] \operatorname{Cos}[c+d x]^4 \operatorname{Log}\left[\operatorname{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]-\operatorname{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right]\left(a+i a \operatorname{Tan}[c+d x]\right)^4\right) \Big/ \left(2 d\left(\operatorname{Cos}[d x]+i \operatorname{Sin}[d x]\right)^4\right)-$$
$$\left(15 \operatorname{Cos}[4 c] \operatorname{Cos}[c+d x]^4 \operatorname{Log}\left[\operatorname{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]+\operatorname{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right]\left(a+i a \operatorname{Tan}[c+d x]\right)^4\right) \Big/ \left(2 d\left(\operatorname{Cos}[d x]+i \operatorname{Sin}[d x]\right)^4\right)+$$
$$\left(\operatorname{Cos}[d x] \operatorname{Cos}[c+d x]^4\left(-8 i \operatorname{Cos}[3 c]-8 \operatorname{Sin}[3 c]\right)\left(a+i a \operatorname{Tan}[c+d x]\right)^4\right) \Big/ \left(d\left(\operatorname{Cos}[d x]+i \operatorname{Sin}[d x]\right)^4\right)+$$
$$\left(\operatorname{Cos}[c+d x]^4 \operatorname{Sec}[c]\left(-4 i \operatorname{Cos}[4 c]-4 \operatorname{Sin}[4 c]\right)\left(a+i a \operatorname{Tan}[c+d x]\right)^4\right) \Big/ \left(d\left(\operatorname{Cos}[d x]+i \operatorname{Sin}[d x]\right)^4\right)-$$
$$\left(15 i \operatorname{Cos}[c+d x]^4 \operatorname{Log}\left[\operatorname{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]-\operatorname{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right] \operatorname{Sin}[4 c]\left(a+i a \operatorname{Tan}[c+d x]\right)^4\right) \Big/ \left(2 d\left(\operatorname{Cos}[d x]+i \operatorname{Sin}[d x]\right)^4\right)+$$
$$\left(15 i \operatorname{Cos}[c+d x]^4 \operatorname{Log}\left[\operatorname{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]+\operatorname{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right] \operatorname{Sin}[4 c]\left(a+i a \operatorname{Tan}[c+d x]\right)^4\right) \Big/ \left(2 d\left(\operatorname{Cos}[d x]+i \operatorname{Sin}[d x]\right)^4\right)+$$
$$\left(\operatorname{Cos}[c+d x]^4\left(8 \operatorname{Cos}[3 c]-8 i \operatorname{Sin}[3 c]\right) \operatorname{Sin}[d x]\left(a+i a \operatorname{Tan}[c+d x]\right)^4\right) \Big/ \left(d\left(\operatorname{Cos}[d x]+i \operatorname{Sin}[d x]\right)^4\right)+\frac{\operatorname{Cos}[c+d x]^4\left(\frac{1}{4} \operatorname{Cos}[4 c]-\frac{1}{4} i \operatorname{Sin}[4 c]\right)\left(a+i a \operatorname{Tan}[c+d x]\right)^4}{d\left(\operatorname{Cos}[d x]+i \operatorname{Sin}[d x]\right)^4\left(\operatorname{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]-\operatorname{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right)^2}-$$
$$\left(i \operatorname{Cos}[c+d x]^4\left(4 \operatorname{Cos}[4 c]-4 i \operatorname{Sin}[4 c]\right) \operatorname{Sin}\left[\frac{d x}{2}\right]\left(a+i a \operatorname{Tan}[c+d x]\right)^4\right) \Big/ \left(d\left(\operatorname{Cos}\left[\frac{c}{2}\right]-\operatorname{Sin}\left[\frac{c}{2}\right]\right)\left(\operatorname{Cos}[d x]+i \operatorname{Sin}[d x]\right)^4\left(\operatorname{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]-\operatorname{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right)\right)+$$
$$\frac{\operatorname{Cos}[c+d x]^4\left(-\frac{1}{4} \operatorname{Cos}[4 c]+\frac{1}{4} i \operatorname{Sin}[4 c]\right)\left(a+i a \operatorname{Tan}[c+d x]\right)^4}{d\left(\operatorname{Cos}[d x]+i \operatorname{Sin}[d x]\right)^4\left(\operatorname{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]+\operatorname{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right)^2}+$$
$$\left(i \operatorname{Cos}[c+d x]^4\left(4 \operatorname{Cos}[4 c]-4 i \operatorname{Sin}[4 c]\right) \operatorname{Sin}\left[\frac{d x}{2}\right]\left(a+i a \operatorname{Tan}[c+d x]\right)^4\right) \Big/ \left(d\left(\operatorname{Cos}\left[\frac{c}{2}\right]+\operatorname{Sin}\left[\frac{c}{2}\right]\right)\left(\operatorname{Cos}[d x]+i \operatorname{Sin}[d x]\right)^4\left(\operatorname{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]+\operatorname{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right)\right)$$

Problem 55: Result more than twice size of optimal antiderivative.

$$\int \operatorname{Cos}[c+d x]^3\left(a+i a \operatorname{Tan}[c+d x]\right)^4 dx$$

Optimal (type 3, 78 leaves, 3 steps):

$$\frac{a^4 \text{ArcTanh}[\text{Sin}[c+d x]]}{d}-\frac{2 i a \text{Cos}[c+d x]^3 (a+i a \text{Tan}[c+d x])^3}{3 d}+\frac{2 i \text{Cos}[c+d x] \left(a^4+i a^4 \text{Tan}[c+d x]\right)}{d}$$

Result (type 3, 246 leaves):

$$\frac{1}{3 d (\text{Cos}[d x]+i \text{Sin}[d x])^4} a^4 \Big(-3 \text{Cos}[4 c] \text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right]+ 3 \text{Cos}[4 c] \text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]+\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right]-2 \text{Cos}[3 d x] \text{Sin}[c]+ 6 \text{Cos}[d x] \text{Sin}[3 c]+3 i \text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right] \text{Sin}[4 c]- 3 i \text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]+\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right] \text{Sin}[4 c]+ \text{Cos}[3 c] (6 i \text{Cos}[d x]-6 \text{Sin}[d x])+6 i \text{Sin}[3 c] \text{Sin}[d x]-2 i \text{Sin}[c] \text{Sin}[3 d x]+ 2 \text{Cos}[c] (-i \text{Cos}[3 d x]+\text{Sin}[3 d x])\Big) (\text{Cos}[c+d x]+i \text{Sin}[c+d x])^4$$

Problem 61: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d x]^4 (a+i a \text{Tan}[c+d x])^5 \, dx$$

Optimal (type 3, 55 leaves, 3 steps):

$$-\frac{2 i (a+i a \text{Tan}[c+d x])^7}{7 a^2 d}+\frac{i (a+i a \text{Tan}[c+d x])^8}{8 a^3 d}$$

Result (type 3, 143 leaves):

$$\frac{1}{56 d} a^5 \text{Sec}[c] \text{Sec}[c+d x]^8 (35 i \text{Cos}[c]+28 i \text{Cos}[c+2 d x]+28 i \text{Cos}[3 c+2 d x]+14 i \text{Cos}[3 c+4 d x]+ 14 i \text{Cos}[5 c+4 d x]-35 \text{Sin}[c]+28 \text{Sin}[c+2 d x]-28 \text{Sin}[3 c+2 d x]+ 14 \text{Sin}[3 c+4 d x]-14 \text{Sin}[5 c+4 d x]+8 \text{Sin}[5 c+6 d x]+\text{Sin}[7 c+8 d x])$$

Problem 62: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d x]^2 (a+i a \text{Tan}[c+d x])^5 \, dx$$

Optimal (type 3, 27 leaves, 2 steps):

$$-\frac{i (a+i a \text{Tan}[c+d x])^6}{6 a d}$$

Result (type 3, 134 leaves):

$$\frac{1}{12\,d}a^5\,\mathrm{Sec}[c]\,\mathrm{Sec}[c+d\,x]^6\,\big(20\,i\,\mathrm{Cos}[c]+15\,i\,\mathrm{Cos}[c+2\,d\,x]+15\,i\,\mathrm{Cos}[3\,c+2\,d\,x]+6\,i\,\mathrm{Cos}[3\,c+4\,d\,x]+6\,i\,\mathrm{Cos}[5\,c+4\,d\,x]-20\,\mathrm{Sin}[c]+15\,\mathrm{Sin}[c+2\,d\,x]-15\,\mathrm{Sin}[3\,c+2\,d\,x]+6\,\mathrm{Sin}[3\,c+4\,d\,x]-6\,\mathrm{Sin}[5\,c+4\,d\,x]+2\,\mathrm{Sin}[5\,c+6\,d\,x]\big)$$

Problem 63: Result more than twice size of optimal antiderivative.

$$\int(a+i\,a\,\mathrm{Tan}[c+d\,x])^5\,dx$$

Optimal (type 3, 117 leaves, 5 steps):

$$16\,a^5\,x-\frac{16\,i\,a^5\,\mathrm{Log}[\mathrm{Cos}[c+d\,x]]}{d}-\frac{8\,a^5\,\mathrm{Tan}[c+d\,x]}{d}+\frac{2\,i\,a^2\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^3}{3\,d}+\frac{i\,a\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^4}{4\,d}+\frac{2\,i\,a\,(a^2+i\,a^2\,\mathrm{Tan}[c+d\,x])^2}{d}$$

Result (type 3, 728 leaves):

$$\frac{16\,x\,\text{Cos}[5\,c]\,\text{Cos}[c+d\,x]^5\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5}{(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5}-\frac{8\,\mathrm{i}\,\text{Cos}[5\,c]\,\text{Cos}[c+d\,x]^5\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5}{d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5}+$$

$$\left(\text{Cos}[c+d\,x]^3\,(18\,\text{Cos}[c]+5\,\mathrm{i}\,\text{Sin}[c])\left(-\frac{1}{3}\,\mathrm{i}\,\text{Cos}[5\,c]-\frac{1}{3}\,\text{Sin}[5\,c]\right)(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5\right)\Big/$$
$$\left(d\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5\right)+$$

$$\frac{\text{Cos}[c+d\,x]\left(\frac{1}{4}\,\mathrm{i}\,\text{Cos}[5\,c]+\frac{1}{4}\,\text{Sin}[5\,c]\right)(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5}{d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5}-\frac{16\,\mathrm{i}\,x\,\text{Cos}[c+d\,x]^5\,\text{Sin}[5\,c]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5}{(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5}-$$

$$\frac{8\,\text{Cos}[c+d\,x]^5\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[5\,c]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5}{d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5}+$$

$$\left(\text{Cos}[c+d\,x]^2\left(\frac{5}{3}\,\text{Cos}[5\,c]-\frac{5}{3}\,\mathrm{i}\,\text{Sin}[5\,c]\right)\text{Sin}[d\,x]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5\right)\Big/$$
$$\left(d\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5\right)+$$

$$\left(\text{Cos}[c+d\,x]^4\left(-\frac{50}{3}\,\text{Cos}[5\,c]+\frac{50}{3}\,\mathrm{i}\,\text{Sin}[5\,c]\right)\text{Sin}[d\,x]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5\right)\Big/$$
$$\left(d\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5\right)+$$

$$\frac{1}{(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5}\,x\,\text{Cos}[c+d\,x]^5\,\big(-8\,\text{Cos}[c]^3+8\,\text{Cos}[c]^5+32\,\mathrm{i}\,\text{Cos}[c]^2\,\text{Sin}[c]-$$
$$48\,\mathrm{i}\,\text{Cos}[c]^4\,\text{Sin}[c]+48\,\text{Cos}[c]\,\text{Sin}[c]^2-120\,\text{Cos}[c]^3\,\text{Sin}[c]^2-32\,\mathrm{i}\,\text{Sin}[c]^3+$$
$$160\,\mathrm{i}\,\text{Cos}[c]^2\,\text{Sin}[c]^3+120\,\text{Cos}[c]\,\text{Sin}[c]^4-48\,\mathrm{i}\,\text{Sin}[c]^5-8\,\text{Sin}[c]^3\,\text{Tan}[c]-$$
$$8\,\text{Sin}[c]^5\,\text{Tan}[c]+\mathrm{i}\,(16\,\text{Cos}[5\,c]-16\,\mathrm{i}\,\text{Sin}[5\,c])\,\text{Tan}[c]\big)\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5$$

Problem 64: Result more than twice size of optimal antiderivative.

$$\int \text{Cos}[c+d\,x]^2\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5\,dx$$

Optimal (type 3, 83 leaves, 3 steps):

$$-12\,a^5\,x+\frac{12\,\mathrm{i}\,a^5\,\text{Log}[\text{Cos}[c+d\,x]]}{d}+\frac{5\,a^5\,\text{Tan}[c+d\,x]}{d}+\frac{\mathrm{i}\,a^5\,\text{Tan}[c+d\,x]^2}{2\,d}-\frac{8\,\mathrm{i}\,a^6}{d\,(a-\mathrm{i}\,a\,\text{Tan}[c+d\,x])}$$

Result (type 3, 649 leaves):

$$-\frac{12\,x\,\text{Cos}[5\,c]\,\text{Cos}[c+d\,x]^5\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5}{(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5}+$$
$$\frac{6\,\mathrm{i}\,\text{Cos}[5\,c]\,\text{Cos}[c+d\,x]^5\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5}{d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5}+$$
$$\left(\text{Cos}[2\,d\,x]\,\text{Cos}[c+d\,x]^5\,(-4\,\mathrm{i}\,\text{Cos}[3\,c]-4\,\text{Sin}[3\,c])\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5\right)\Big/$$
$$\left(d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5\right)+\frac{\text{Cos}[c+d\,x]^3\,\left(\frac{1}{2}\,\mathrm{i}\,\text{Cos}[5\,c]+\frac{1}{2}\,\text{Sin}[5\,c]\right)\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5}{d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5}+$$
$$\frac{12\,\mathrm{i}\,x\,\text{Cos}[c+d\,x]^5\,\text{Sin}[5\,c]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5}{(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5}+$$
$$\frac{6\,\text{Cos}[c+d\,x]^5\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[5\,c]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5}{d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5}+$$
$$\left(\text{Cos}[c+d\,x]^4\,(5\,\text{Cos}[5\,c]-5\,\mathrm{i}\,\text{Sin}[5\,c])\,\text{Sin}[d\,x]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5\right)\Big/$$
$$\left(d\,\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\,\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5\right)+$$
$$\left(\text{Cos}[c+d\,x]^5\,(4\,\text{Cos}[3\,c]-4\,\mathrm{i}\,\text{Sin}[3\,c])\,\text{Sin}[2\,d\,x]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5\right)\Big/$$
$$\left(d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5\right)+$$
$$\frac{1}{(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^5}\,x\,\text{Cos}[c+d\,x]^5\,\left(6\,\text{Cos}[c]^3-6\,\text{Cos}[c]^5-24\,\mathrm{i}\,\text{Cos}[c]^2\,\text{Sin}[c]+\right.$$
$$36\,\mathrm{i}\,\text{Cos}[c]^4\,\text{Sin}[c]-36\,\text{Cos}[c]\,\text{Sin}[c]^2+90\,\text{Cos}[c]^3\,\text{Sin}[c]^2+24\,\mathrm{i}\,\text{Sin}[c]^3-$$
$$120\,\mathrm{i}\,\text{Cos}[c]^2\,\text{Sin}[c]^3-90\,\text{Cos}[c]\,\text{Sin}[c]^4+36\,\mathrm{i}\,\text{Sin}[c]^5+6\,\text{Sin}[c]^3\,\text{Tan}[c]+$$
$$\left.6\,\text{Sin}[c]^5\,\text{Tan}[c]-\mathrm{i}\,(12\,\text{Cos}[5\,c]-12\,\mathrm{i}\,\text{Sin}[5\,c])\,\text{Tan}[c]\right)\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5$$

Problem 67: Result more than twice size of optimal antiderivative.

$$\int \text{Cos}[c+d\,x]^8\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^5\,dx$$

Optimal (type 3, 27 leaves, 2 steps):

$$-\frac{\mathrm{i}\,a^9}{4\,d\,(a-\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4}$$

Result (type 3, 73 leaves):

$$\frac{1}{64\,d}a^5\,(10\,\text{Cos}[c+d\,x]+5\,\text{Cos}[3\,(c+d\,x)]-\mathrm{i}\,(2\,\text{Sin}[c+d\,x]+3\,\text{Sin}[3\,(c+d\,x)]))$$
$$(-\mathrm{i}\,\text{Cos}[5\,(c+d\,x)]+\text{Sin}[5\,(c+d\,x)])$$

Problem 77: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]^8\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8\,dx$$

Optimal (type 3, 109 leaves, 3 steps):

$$-\frac{2 i (a+i a \tan(c+d x))^{12}}{3 a^4 d}+\frac{12 i (a+i a \tan(c+d x))^{13}}{13 a^5 d}-\frac{3 i (a+i a \tan(c+d x))^{14}}{7 a^6 d}+\frac{i (a+i a \tan(c+d x))^{15}}{15 a^7 d}$$

Result (type 3, 245 leaves):

$$\frac{1}{10920 d} a^8 \sec(c) \sec(c+d x)^{15} \left(6435 i \cos(d x)+6435 i \cos(2 c+d x)+5005 i \cos(2 c+3 d x)+5005 i \cos(4 c+3 d x)+3003 i \cos(4 c+5 d x)+3003 i \cos(6 c+5 d x)+1365 i \cos(6 c+7 d x)+1365 i \cos(8 c+7 d x)+6435 \sin(d x)-6435 \sin(2 c+d x)+5005 \sin(2 c+3 d x)-5005 \sin(4 c+3 d x)+3003 \sin(4 c+5 d x)-3003 \sin(6 c+5 d x)+1365 \sin(6 c+7 d x)-1365 \sin(8 c+7 d x)+910 \sin(8 c+9 d x)+210 \sin(10 c+11 d x)+30 \sin(12 c+13 d x)+2 \sin(14 c+15 d x)\right)$$

Problem 78: Result more than twice size of optimal antiderivative.

$$\int \sec(c+d x)^6 (a+i a \tan(c+d x))^8 \, dx$$

Optimal (type 3, 82 leaves, 3 steps):

$$-\frac{4 i (a+i a \tan(c+d x))^{11}}{11 a^3 d}+\frac{i (a+i a \tan(c+d x))^{12}}{3 a^4 d}-\frac{i (a+i a \tan(c+d x))^{13}}{13 a^5 d}$$

Result (type 3, 234 leaves):

$$\frac{1}{1716 d} a^8 \sec(c) \sec(c+d x)^{13} \left(1716 i \cos(d x)+1716 i \cos(2 c+d x)+1287 i \cos(2 c+3 d x)+1287 i \cos(4 c+3 d x)+715 i \cos(4 c+5 d x)+715 i \cos(6 c+5 d x)+286 i \cos(6 c+7 d x)+286 i \cos(8 c+7 d x)+1716 \sin(d x)-1716 \sin(2 c+d x)+1287 \sin(2 c+3 d x)-1287 \sin(4 c+3 d x)+715 \sin(4 c+5 d x)-715 \sin(6 c+5 d x)+286 \sin(6 c+7 d x)-286 \sin(8 c+7 d x)+156 \sin(8 c+9 d x)+26 \sin(10 c+11 d x)+2 \sin(12 c+13 d x)\right)$$

Problem 79: Result more than twice size of optimal antiderivative.

$$\int \sec(c+d x)^4 (a+i a \tan(c+d x))^8 \, dx$$

Optimal (type 3, 55 leaves, 3 steps):

$$-\frac{i (a+i a \tan(c+d x))^{10}}{5 a^2 d}+\frac{i (a+i a \tan(c+d x))^{11}}{11 a^3 d}$$

Result (type 3, 223 leaves):

$$\frac{1}{220\,d}a^8\,\text{Sec}[c]\,\text{Sec}[c+d\,x]^{11}\,\big(462\,i\,\text{Cos}[d\,x]+462\,i\,\text{Cos}[2\,c+d\,x]+330\,i\,\text{Cos}[2\,c+3\,d\,x]+330\,i\,\text{Cos}[4\,c+3\,d\,x]+165\,i\,\text{Cos}[4\,c+5\,d\,x]+165\,i\,\text{Cos}[6\,c+5\,d\,x]+55\,i\,\text{Cos}[6\,c+7\,d\,x]+55\,i\,\text{Cos}[8\,c+7\,d\,x]+462\,\text{Sin}[d\,x]-462\,\text{Sin}[2\,c+d\,x]+330\,\text{Sin}[2\,c+3\,d\,x]-330\,\text{Sin}[4\,c+3\,d\,x]+165\,\text{Sin}[4\,c+5\,d\,x]-165\,\text{Sin}[6\,c+5\,d\,x]+55\,\text{Sin}[6\,c+7\,d\,x]-55\,\text{Sin}[8\,c+7\,d\,x]+22\,\text{Sin}[8\,c+9\,d\,x]+2\,\text{Sin}[10\,c+11\,d\,x]\big)$$

Problem 80: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]^2\,(a+i\,a\,\text{Tan}[c+d\,x])^8\,dx$$

Optimal (type 3, 27 leaves, 2 steps):

$$-\frac{i\,(a+i\,a\,\text{Tan}[c+d\,x])^9}{9\,a\,d}$$

Result (type 3, 212 leaves):

$$\frac{1}{18\,d}a^8\,\text{Sec}[c]\,\text{Sec}[c+d\,x]^9\,\big(126\,i\,\text{Cos}[d\,x]+126\,i\,\text{Cos}[2\,c+d\,x]+84\,i\,\text{Cos}[2\,c+3\,d\,x]+84\,i\,\text{Cos}[4\,c+3\,d\,x]+36\,i\,\text{Cos}[4\,c+5\,d\,x]+36\,i\,\text{Cos}[6\,c+5\,d\,x]+9\,i\,\text{Cos}[6\,c+7\,d\,x]+9\,i\,\text{Cos}[8\,c+7\,d\,x]+126\,\text{Sin}[d\,x]-126\,\text{Sin}[2\,c+d\,x]+84\,\text{Sin}[2\,c+3\,d\,x]-84\,\text{Sin}[4\,c+3\,d\,x]+36\,\text{Sin}[4\,c+5\,d\,x]-36\,\text{Sin}[6\,c+5\,d\,x]+9\,\text{Sin}[6\,c+7\,d\,x]-9\,\text{Sin}[8\,c+7\,d\,x]+2\,\text{Sin}[8\,c+9\,d\,x]\big)$$

Problem 82: Result more than twice size of optimal antiderivative.

$$\int \text{Cos}[c+d\,x]^2\,(a+i\,a\,\text{Tan}[c+d\,x])^8\,dx$$

Optimal (type 3, 133 leaves, 3 steps):

$$-192\,a^8\,x+\frac{192\,i\,a^8\,\text{Log}[\text{Cos}[c+d\,x]]}{d}+\frac{129\,a^8\,\text{Tan}[c+d\,x]}{d}+\frac{36\,i\,a^8\,\text{Tan}[c+d\,x]^2}{d}-\frac{10\,a^8\,\text{Tan}[c+d\,x]^3}{d}-\frac{2\,i\,a^8\,\text{Tan}[c+d\,x]^4}{d}+\frac{a^8\,\text{Tan}[c+d\,x]^5}{5\,d}-\frac{64\,i\,a^9}{d\,(a-i\,a\,\text{Tan}[c+d\,x])}$$

Result (type 3, 912 leaves):

$$-\frac{192\,x\,\text{Cos}[8\,c]\,\text{Cos}[c+d\,x]^8\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8}{(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^8}+$$
$$\frac{96\,\mathrm{i}\,\text{Cos}[8\,c]\,\text{Cos}[c+d\,x]^8\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8}{d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^8}+$$
$$\left(\text{Cos}[2\,d\,x]\,\text{Cos}[c+d\,x]^8\,(-32\,\mathrm{i}\,\text{Cos}[6\,c]-32\,\text{Sin}[6\,c])\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8\right)\Big/$$
$$\left(d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^8\right)+\Bigg(\text{Cos}[c+d\,x]^4\,\text{Sec}[c]\,(10\,\text{Cos}[c]+\mathrm{i}\,\text{Sin}[c])$$
$$\left(-\frac{1}{5}\,\mathrm{i}\,\text{Cos}[8\,c]-\frac{1}{5}\,\text{Sin}[8\,c]\right)\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8\Bigg)\Big/\left(d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^8\right)+$$
$$\Bigg(\text{Cos}[c+d\,x]^6\,\text{Sec}[c]\,(50\,\text{Cos}[c]+13\,\mathrm{i}\,\text{Sin}[c])\,\left(\frac{4}{5}\,\mathrm{i}\,\text{Cos}[8\,c]+\frac{4}{5}\,\text{Sin}[8\,c]\right)$$
$$(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8\Bigg)\Big/\left(d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^8\right)+$$
$$\frac{192\,\mathrm{i}\,x\,\text{Cos}[c+d\,x]^8\,\text{Sin}[8\,c]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8}{(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^8}+$$
$$\frac{96\,\text{Cos}[c+d\,x]^8\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[8\,c]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8}{d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^8}+$$
$$\left(\text{Cos}[c+d\,x]^3\,\text{Sec}[c]\,\left(\frac{1}{5}\,\text{Cos}[8\,c]-\frac{1}{5}\,\mathrm{i}\,\text{Sin}[8\,c]\right)\,\text{Sin}[d\,x]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8\right)\Big/$$
$$\left(d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^8\right)+$$
$$\left(\text{Cos}[c+d\,x]^5\,\text{Sec}[c]\,\left(-\frac{52}{5}\,\text{Cos}[8\,c]+\frac{52}{5}\,\mathrm{i}\,\text{Sin}[8\,c]\right)\,\text{Sin}[d\,x]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8\right)\Big/$$
$$\left(d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^8\right)+$$
$$\left(\text{Cos}[c+d\,x]^7\,\text{Sec}[c]\,\left(\frac{696}{5}\,\text{Cos}[8\,c]-\frac{696}{5}\,\mathrm{i}\,\text{Sin}[8\,c]\right)\,\text{Sin}[d\,x]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8\right)\Big/$$
$$\left(d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^8\right)+$$
$$\left(\text{Cos}[c+d\,x]^8\,(32\,\text{Cos}[6\,c]-32\,\mathrm{i}\,\text{Sin}[6\,c])\,\text{Sin}[2\,d\,x]\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8\right)\Big/$$
$$\left(d\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^8\right)+$$
$$\frac{1}{(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^8}\,x\,\text{Cos}[c+d\,x]^8\,\Big(96\,\text{Cos}[c]^6-96\,\text{Cos}[c]^8-672\,\mathrm{i}\,\text{Cos}[c]^5\,\text{Sin}[c]+$$
$$864\,\mathrm{i}\,\text{Cos}[c]^7\,\text{Sin}[c]-2016\,\text{Cos}[c]^4\,\text{Sin}[c]^2+3456\,\text{Cos}[c]^6\,\text{Sin}[c]^2+$$
$$3360\,\mathrm{i}\,\text{Cos}[c]^3\,\text{Sin}[c]^3-8064\,\mathrm{i}\,\text{Cos}[c]^5\,\text{Sin}[c]^3+3360\,\text{Cos}[c]^2\,\text{Sin}[c]^4-$$
$$12\,096\,\text{Cos}[c]^4\,\text{Sin}[c]^4-2016\,\mathrm{i}\,\text{Cos}[c]\,\text{Sin}[c]^5+12\,096\,\mathrm{i}\,\text{Cos}[c]^3\,\text{Sin}[c]^5-672\,\text{Sin}[c]^6+$$
$$8064\,\text{Cos}[c]^2\,\text{Sin}[c]^6-3456\,\mathrm{i}\,\text{Cos}[c]\,\text{Sin}[c]^7-864\,\text{Sin}[c]^8+96\,\mathrm{i}\,\text{Sin}[c]^6\,\text{Tan}[c]+$$
$$96\,\mathrm{i}\,\text{Sin}[c]^8\,\text{Tan}[c]-\mathrm{i}\,(192\,\text{Cos}[8\,c]-192\,\mathrm{i}\,\text{Sin}[8\,c])\,\text{Tan}[c]\Big)\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8$$

Problem 83: Result more than twice size of optimal antiderivative.

$$\int \text{Cos}[c+d\,x]^4\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^8\,dx$$

Optimal (type 3, 124 leaves, 3 steps):

$$80\,a^8\,x-\frac{80\,i\,a^8\,\text{Log}[\text{Cos}[c+d\,x]]}{d}-\frac{31\,a^8\,\text{Tan}[c+d\,x]}{d}-\frac{4\,i\,a^8\,\text{Tan}[c+d\,x]^2}{d}+\frac{a^8\,\text{Tan}[c+d\,x]^3}{3\,d}-\frac{16\,i\,a^{10}}{d\,\left(a-i\,a\,\text{Tan}[c+d\,x]\right)^2}+\frac{80\,i\,a^9}{d\,\left(a-i\,a\,\text{Tan}[c+d\,x]\right)}$$

Result (type 3, 566 leaves):

$$\frac{1}{12\,d\,\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8}\,a^8\,\text{Sec}[c]\,\text{Sec}[c+d\,x]^3\,\left(\text{Cos}\left[2\,\left(c+5\,d\,x\right)\right]+i\,\text{Sin}\left[2\,\left(c+5\,d\,x\right)\right]\right)$$
$$\Big(-66\,i\,\text{Cos}[2\,c+3\,d\,x]+180\,d\,x\,\text{Cos}[2\,c+3\,d\,x]+75\,i\,\text{Cos}[4\,c+3\,d\,x]+$$
$$180\,d\,x\,\text{Cos}[4\,c+3\,d\,x]-50\,i\,\text{Cos}[4\,c+5\,d\,x]+60\,d\,x\,\text{Cos}[4\,c+5\,d\,x]-3\,i\,\text{Cos}[6\,c+5\,d\,x]+$$
$$60\,d\,x\,\text{Cos}[6\,c+5\,d\,x]+3\,\text{Cos}[2\,c+d\,x]\,\left(71\,i+80\,d\,x-40\,i\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\right)+$$
$$\text{Cos}[d\,x]\,\left(119\,i+240\,d\,x-120\,i\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\right)-$$
$$90\,i\,\text{Cos}[2\,c+3\,d\,x]\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]-90\,i\,\text{Cos}[4\,c+3\,d\,x]\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]-$$
$$30\,i\,\text{Cos}[4\,c+5\,d\,x]\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]-30\,i\,\text{Cos}[6\,c+5\,d\,x]\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]-$$
$$101\,\text{Sin}[d\,x]-120\,i\,d\,x\,\text{Sin}[d\,x]-60\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[d\,x]+$$
$$87\,\text{Sin}[2\,c+d\,x]-120\,i\,d\,x\,\text{Sin}[2\,c+d\,x]-60\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[2\,c+d\,x]-$$
$$96\,\text{Sin}[2\,c+3\,d\,x]-180\,i\,d\,x\,\text{Sin}[2\,c+3\,d\,x]-90\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[2\,c+3\,d\,x]+$$
$$45\,\text{Sin}[4\,c+3\,d\,x]-180\,i\,d\,x\,\text{Sin}[4\,c+3\,d\,x]-90\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[4\,c+3\,d\,x]-$$
$$44\,\text{Sin}[4\,c+5\,d\,x]-60\,i\,d\,x\,\text{Sin}[4\,c+5\,d\,x]-30\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[4\,c+5\,d\,x]+$$
$$3\,\text{Sin}[6\,c+5\,d\,x]-60\,i\,d\,x\,\text{Sin}[6\,c+5\,d\,x]-30\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[6\,c+5\,d\,x]\Big)$$

Problem 84: Result more than twice size of optimal antiderivative.

$$\int \text{Cos}[c+d\,x]^6\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8\,dx$$

Optimal (type 3, 114 leaves, 3 steps):

$$-8\,a^8\,x+\frac{8\,i\,a^8\,\text{Log}[\text{Cos}[c+d\,x]]}{d}+\frac{a^8\,\text{Tan}[c+d\,x]}{d}-\frac{16\,i\,a^{11}}{3\,d\,\left(a-i\,a\,\text{Tan}[c+d\,x]\right)^3}+\frac{16\,i\,a^{10}}{d\,\left(a-i\,a\,\text{Tan}[c+d\,x]\right)^2}-\frac{24\,i\,a^9}{d\,\left(a-i\,a\,\text{Tan}[c+d\,x]\right)}$$

Result (type 3, 414 leaves):

$$-\frac{1}{6\,d\,\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8}$$
$$a^8\,\text{Sec}[c]\,\text{Sec}[c+d\,x]\,\Big(12\,i\,\text{Cos}[c]+10\,i\,\text{Cos}[3\,c+2\,d\,x]+12\,d\,x\,\text{Cos}[3\,c+2\,d\,x]-$$
$$2\,i\,\text{Cos}[3\,c+4\,d\,x]+12\,d\,x\,\text{Cos}[3\,c+4\,d\,x]+i\,\text{Cos}[5\,c+4\,d\,x]+12\,d\,x\,\text{Cos}[5\,c+4\,d\,x]+$$
$$\text{Cos}[c+2\,d\,x]\,\left(7\,i+12\,d\,x-6\,i\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\right)-6\,i\,\text{Cos}[3\,c+2\,d\,x]\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]-$$
$$6\,i\,\text{Cos}[3\,c+4\,d\,x]\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]-6\,i\,\text{Cos}[5\,c+4\,d\,x]\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]+$$
$$11\,\text{Sin}[c+2\,d\,x]-12\,i\,d\,x\,\text{Sin}[c+2\,d\,x]-6\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[c+2\,d\,x]+$$
$$14\,\text{Sin}[3\,c+2\,d\,x]-12\,i\,d\,x\,\text{Sin}[3\,c+2\,d\,x]-6\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[3\,c+2\,d\,x]-$$
$$4\,\text{Sin}[3\,c+4\,d\,x]-12\,i\,d\,x\,\text{Sin}[3\,c+4\,d\,x]-6\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[3\,c+4\,d\,x]-$$
$$\text{Sin}[5\,c+4\,d\,x]-12\,i\,d\,x\,\text{Sin}[5\,c+4\,d\,x]-6\,\text{Log}\left[\text{Cos}[c+d\,x]^2\right]\,\text{Sin}[5\,c+4\,d\,x]\Big)$$
$$\left(\text{Cos}[3\,c+11\,d\,x]+i\,\text{Sin}[3\,c+11\,d\,x]\right)$$

Problem 88: Result more than twice size of optimal antiderivative.

$$\int \text{Cos}[c+d x]^{14} (a+i a \text{Tan}[c+d x])^8 \, dx$$

Optimal (type 3, 27 leaves, 2 steps):

$$-\frac{i a^{15}}{7 d (a-i a \text{Tan}[c+d x])^7}$$

Result (type 3, 116 leaves):

$$\left(a^8 \left(35+56 \text{Cos}[2 (c+d x)]+28 \text{Cos}[4 (c+d x)]+8 \text{Cos}[6 (c+d x)]-14 i \text{Sin}[2 (c+d x)]-14 i \text{Sin}[4 (c+d x)]-6 i \text{Sin}[6 (c+d x)]\right) (-i \text{Cos}[8 (c+2 d x)]+\text{Sin}[8 (c+2 d x)])\right) \Big/ \left(896 d (\text{Cos}[d x]+i \text{Sin}[d x])^8\right)$$

Problem 92: Result more than twice size of optimal antiderivative.

$$\int \text{Cos}[c+d x]^3 (a+i a \text{Tan}[c+d x])^8 \, dx$$

Optimal (type 3, 205 leaves, 7 steps):

$$\frac{1155 a^8 \text{ArcTanh}[\text{Sin}[c+d x]]}{8 d}+\frac{1155 i a^8 \text{Sec}[c+d x]}{8 d}+\frac{22 i a^3 \text{Cos}[c+d x] (a+i a \text{Tan}[c+d x])^5}{3 d}-\frac{2 i a \text{Cos}[c+d x]^3 (a+i a \text{Tan}[c+d x])^7}{3 d}+\frac{33 i a^2 \text{Sec}[c+d x] \left(a^2+i a^2 \text{Tan}[c+d x]\right)^3}{4 d}+\frac{77 i \text{Sec}[c+d x] \left(a^4+i a^4 \text{Tan}[c+d x]\right)^2}{4 d}+\frac{385 i \text{Sec}[c+d x] \left(a^8+i a^8 \text{Tan}[c+d x]\right)}{8 d}$$

Result (type 3, 1540 leaves):

$$-\left(\left(1155 \text{Cos}[8 c] \text{Cos}[c+d x]^8 \text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right] (a+i a \text{Tan}[c+d x])^8\right) \Big/ \left(8 d (\text{Cos}[d x]+i \text{Sin}[d x])^8\right)\right)+$$
$$\left(1155 \text{Cos}[8 c] \text{Cos}[c+d x]^8 \text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right] (a+i a \text{Tan}[c+d x])^8\right) \Big/ \left(8 d (\text{Cos}[d x]+i \text{Sin}[d x])^8\right)+$$
$$\left(\text{Cos}[3 d x] \text{Cos}[c+d x]^8 \left(-\frac{32}{3} i \text{Cos}[5 c]-\frac{32}{3} \text{Sin}[5 c]\right) (a+i a \text{Tan}[c+d x])^8\right) \Big/ \left(d (\text{Cos}[d x]+i \text{Sin}[d x])^8\right)+$$
$$\left(\text{Cos}[d x] \text{Cos}[c+d x]^8 (160 i \text{Cos}[7 c]+160 \text{Sin}[7 c]) (a+i a \text{Tan}[c+d x])^8\right) \Big/ \left(d (\text{Cos}[d x]+i \text{Sin}[d x])^8\right)+$$
$$\left(1155 i \text{Cos}[c+d x]^8 \text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right] \text{Sin}[8 c] (a+i a \text{Tan}[c+d x])^8\right) \Big/ \left(8 d (\text{Cos}[d x]+i \text{Sin}[d x])^8\right)-$$

$$\left(1155\,i\,\mathrm{Cos}[c+d\,x]^8\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\,\mathrm{Sin}[8\,c]\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(8\,d\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^8\right)+$$
$$\left(\mathrm{Cos}[c+d\,x]^8\,\mathrm{Sec}[c]\,\left(\frac{236}{3}\,i\,\mathrm{Cos}[8\,c]+\frac{236}{3}\,\mathrm{Sin}[8\,c]\right)\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^8\right)+$$
$$\left(\mathrm{Cos}[c+d\,x]^8\,\left(-160\,\mathrm{Cos}[7\,c]+160\,i\,\mathrm{Sin}[7\,c]\right)\,\mathrm{Sin}[d\,x]\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^8\right)+$$
$$\left(\mathrm{Cos}[c+d\,x]^8\,\left(\frac{32}{3}\,\mathrm{Cos}[5\,c]-\frac{32}{3}\,i\,\mathrm{Sin}[5\,c]\right)\,\mathrm{Sin}[3\,d\,x]\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^8\right)+\frac{\mathrm{Cos}[c+d\,x]^8\,\left(\frac{1}{16}\,\mathrm{Cos}[8\,c]-\frac{1}{16}\,i\,\mathrm{Sin}[8\,c]\right)\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^8}{d\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^8\,\left(\mathrm{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^4}-$$
$$\left(i\,\mathrm{Cos}[c+d\,x]^8\,\left(\frac{4}{3}\,\mathrm{Cos}[8\,c]-\frac{4}{3}\,i\,\mathrm{Sin}[8\,c]\right)\,\mathrm{Sin}\left[\frac{d\,x}{2}\right]\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^8\,\left(\mathrm{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^3\right)+$$
$$\left(\mathrm{Cos}[c+d\,x]^8\,\left(\left(-375-32\,i\right)\,\mathrm{Cos}\left[\frac{c}{2}\right]+\left(375-32\,i\right)\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.$$
$$\left.\left(\frac{1}{48}\,\mathrm{Cos}[8\,c]-\frac{1}{48}\,i\,\mathrm{Sin}[8\,c]\right)\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^8\,\left(\mathrm{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^2\right)+$$
$$\left(i\,\mathrm{Cos}[c+d\,x]^8\,\left(\frac{236}{3}\,\mathrm{Cos}[8\,c]-\frac{236}{3}\,i\,\mathrm{Sin}[8\,c]\right)\,\mathrm{Sin}\left[\frac{d\,x}{2}\right]\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^8\,\left(\mathrm{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)\right)+$$
$$\frac{\mathrm{Cos}[c+d\,x]^8\,\left(-\frac{1}{16}\,\mathrm{Cos}[8\,c]+\frac{1}{16}\,i\,\mathrm{Sin}[8\,c]\right)\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^8}{d\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^8\,\left(\mathrm{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^4}+$$
$$\left(i\,\mathrm{Cos}[c+d\,x]^8\,\left(\frac{4}{3}\,\mathrm{Cos}[8\,c]-\frac{4}{3}\,i\,\mathrm{Sin}[8\,c]\right)\,\mathrm{Sin}\left[\frac{d\,x}{2}\right]\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^8\,\left(\mathrm{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^3\right)+$$
$$\left(\mathrm{Cos}[c+d\,x]^8\,\left(\left(375-32\,i\right)\,\mathrm{Cos}\left[\frac{c}{2}\right]+\left(375+32\,i\right)\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.$$
$$\left.\left(\frac{1}{48}\,\mathrm{Cos}[8\,c]-\frac{1}{48}\,i\,\mathrm{Sin}[8\,c]\right)\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^8\,\left(\mathrm{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^2\right)-$$
$$\left(i\,\mathrm{Cos}[c+d\,x]^8\,\left(\frac{236}{3}\,\mathrm{Cos}[8\,c]-\frac{236}{3}\,i\,\mathrm{Sin}[8\,c]\right)\,\mathrm{Sin}\left[\frac{d\,x}{2}\right]\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^8\,\left(\mathrm{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)\right)\Bigg)$$

Problem 93: Result more than twice size of optimal antiderivative.

$$\int \text{Cos}[c+d\,x]^5\,\left(a+\mathbb{i}\,a\,\text{Tan}[c+d\,x]\right)^8\,dx$$

Optimal (type 3, 173 leaves, 6 steps):

$$-\frac{63\,a^8\,\text{ArcTanh}[\text{Sin}[c+d\,x]]}{2\,d}-\frac{63\,\mathbb{i}\,a^8\,\text{Sec}[c+d\,x]}{2\,d}+\frac{6\,\mathbb{i}\,a^3\,\text{Cos}[c+d\,x]^3\,\left(a+\mathbb{i}\,a\,\text{Tan}[c+d\,x]\right)^5}{5\,d}-\frac{2\,\mathbb{i}\,a\,\text{Cos}[c+d\,x]^5\,\left(a+\mathbb{i}\,a\,\text{Tan}[c+d\,x]\right)^7}{5\,d}-\frac{42\,\mathbb{i}\,a^2\,\text{Cos}[c+d\,x]\,\left(a^2+\mathbb{i}\,a^2\,\text{Tan}[c+d\,x]\right)^3}{5\,d}-\frac{21\,\mathbb{i}\,\text{Sec}[c+d\,x]\,\left(a^8+\mathbb{i}\,a^8\,\text{Tan}[c+d\,x]\right)}{2\,d}$$

Result (type 3, 1162 leaves):

$$\left(63\,\text{Cos}[8\,c]\,\text{Cos}[c+d\,x]^8\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(2\,d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\right)-$$
$$\left(63\,\text{Cos}[8\,c]\,\text{Cos}[c+d\,x]^8\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(2\,d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\right)+$$
$$\left(\text{Cos}[5\,d\,x]\,\text{Cos}[c+d\,x]^8\,\left(-\frac{8}{5}\,\mathrm{i}\,\text{Cos}[3\,c]-\frac{8}{5}\,\text{Sin}[3\,c]\right)\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\right)+$$
$$\left(\text{Cos}[3\,d\,x]\,\text{Cos}[c+d\,x]^8\,\left(8\,\mathrm{i}\,\text{Cos}[5\,c]+8\,\text{Sin}[5\,c]\right)\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\right)+$$
$$\left(\text{Cos}[d\,x]\,\text{Cos}[c+d\,x]^8\,\left(-48\,\mathrm{i}\,\text{Cos}[7\,c]-48\,\text{Sin}[7\,c]\right)\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\right)+$$
$$\left(\text{Cos}[c+d\,x]^8\,\text{Sec}[c]\,\left(-8\,\mathrm{i}\,\text{Cos}[8\,c]-8\,\text{Sin}[8\,c]\right)\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\right)-$$
$$\left(63\,\mathrm{i}\,\text{Cos}[c+d\,x]^8\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\,\text{Sin}[8\,c]\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(2\,d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\right)+$$
$$\left(63\,\mathrm{i}\,\text{Cos}[c+d\,x]^8\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\,\text{Sin}[8\,c]\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(2\,d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\right)+$$
$$\left(\text{Cos}[c+d\,x]^8\,\left(48\,\text{Cos}[7\,c]-48\,\mathrm{i}\,\text{Sin}[7\,c]\right)\,\text{Sin}[d\,x]\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\right)+$$
$$\left(\text{Cos}[c+d\,x]^8\,\left(-8\,\text{Cos}[5\,c]+8\,\mathrm{i}\,\text{Sin}[5\,c]\right)\,\text{Sin}[3\,d\,x]\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\right)+$$
$$\left(\text{Cos}[c+d\,x]^8\,\left(\frac{8}{5}\,\text{Cos}[3\,c]-\frac{8}{5}\,\mathrm{i}\,\text{Sin}[3\,c]\right)\,\text{Sin}[5\,d\,x]\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\right)+\frac{\text{Cos}[c+d\,x]^8\,\left(\frac{1}{4}\,\text{Cos}[8\,c]-\frac{1}{4}\,\mathrm{i}\,\text{Sin}[8\,c]\right)\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8}{d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\,\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^2}-$$
$$\left(\mathrm{i}\,\text{Cos}[c+d\,x]^8\,\left(8\,\text{Cos}[8\,c]-8\,\mathrm{i}\,\text{Sin}[8\,c]\right)\,\text{Sin}\left[\frac{d\,x}{2}\right]\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\,\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)\right)+$$
$$\frac{\text{Cos}[c+d\,x]^8\,\left(-\frac{1}{4}\,\text{Cos}[8\,c]+\frac{1}{4}\,\mathrm{i}\,\text{Sin}[8\,c]\right)\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8}{d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\,\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^2}+$$
$$\left(\mathrm{i}\,\text{Cos}[c+d\,x]^8\,\left(8\,\text{Cos}[8\,c]-8\,\mathrm{i}\,\text{Sin}[8\,c]\right)\,\text{Sin}\left[\frac{d\,x}{2}\right]\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^8\right)\Big/$$
$$\left(d\,\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)^8\,\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)\right)\Big)$$

Problem 94: Result more than twice size of optimal antiderivative.

$$\int \text{Cos}[c+d x]^7 \left(a+i a \text{Tan}[c+d x]\right)^8 dx$$

Optimal (type 3, 152 leaves, 5 steps):

$$\frac{a^8 \text{ArcTanh}[\text{Sin}[c+d x]]}{d}+\frac{2 i a^3 \text{Cos}[c+d x]^5 \left(a+i a \text{Tan}[c+d x]\right)^5}{5 d}-\frac{2 i a \text{Cos}[c+d x]^7 \left(a+i a \text{Tan}[c+d x]\right)^7}{7 d}-\frac{2 i a^2 \text{Cos}[c+d x]^3 \left(a^2+i a^2 \text{Tan}[c+d x]\right)^3}{3 d}+\frac{2 i \text{Cos}[c+d x] \left(a^8+i a^8 \text{Tan}[c+d x]\right)}{d}$$

Result (type 3, 305 leaves):

$$\frac{1}{105 d \left(\text{Cos}[d x]+i \text{Sin}[d x]\right)^8} a^8 \left(-70 i \text{Cos}\left[\frac{1}{2}(c+d x)\right]+42 i \text{Cos}\left[\frac{3}{2}(c+d x)\right]+210 i \text{Cos}\left[\frac{5}{2}(c+d x)\right]-30 i \text{Cos}\left[\frac{7}{2}(c+d x)\right]-105 \text{Cos}\left[\frac{7}{2}(c+d x)\right] \text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]-\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]+105 \text{Cos}\left[\frac{7}{2}(c+d x)\right] \text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]-70 \text{Sin}\left[\frac{1}{2}(c+d x)\right]-42 \text{Sin}\left[\frac{3}{2}(c+d x)\right]+210 \text{Sin}\left[\frac{5}{2}(c+d x)\right]+30 \text{Sin}\left[\frac{7}{2}(c+d x)\right]+105 i \text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]-\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right] \text{Sin}\left[\frac{7}{2}(c+d x)\right]-105 i \text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right] \text{Sin}\left[\frac{7}{2}(c+d x)\right]\right) \left(\text{Cos}\left[\frac{1}{2}(7 c+23 d x)\right]+i \text{Sin}\left[\frac{1}{2}(7 c+23 d x)\right]\right)$$

Problem 116: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^6}{\left(a+i a \text{Tan}[c+d x]\right)^2} dx$$

Optimal (type 3, 27 leaves, 2 steps):

$$\frac{i \left(a-i a \text{Tan}[c+d x]\right)^3}{3 a^5 d}$$

Result (type 3, 68 leaves):

$$\frac{1}{6 a^2 d} \text{Sec}[c] \text{Sec}[c+d x]^3 \left(-3 i \text{Cos}[d x]-3 i \text{Cos}[2 c+d x]+3 \text{Sin}[d x]-3 \text{Sin}[2 c+d x]+2 \text{Sin}[2 c+3 d x]\right)$$

Problem 122: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^9}{(a+i a \text{Tan}[c+d x])^2} \, dx$$

Optimal (type 3, 124 leaves, 5 steps):

$$\frac{7 \text{ArcTanh}[\text{Sin}[c+d x]]}{16 a^2 d}+\frac{7 \text{Sec}[c+d x] \text{Tan}[c+d x]}{16 a^2 d}+\frac{7 \text{Sec}[c+d x]^3 \text{Tan}[c+d x]}{24 a^2 d}+\frac{7 \text{Sec}[c+d x]^5 \text{Tan}[c+d x]}{30 a^2 d}-\frac{2 i \text{Sec}[c+d x]^7}{5 d \left(a^2+i a^2 \text{Tan}[c+d x]\right)}$$

Result (type 3, 294 leaves):

$$-\frac{1}{7680 a^2 d}\text{Sec}[c+d x]^6 \left(3072 i \text{Cos}[c+d x]+5 \left(210 \text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]-\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]+21 \text{Cos}[6 (c+d x)] \text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]-\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]+315 \text{Cos}[2 (c+d x)] \left(\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]-\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]-\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]\right)+126 \text{Cos}[4 (c+d x)] \left(\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]-\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]-\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]\right)-210 \text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]-21 \text{Cos}[6 (c+d x)] \text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]+60 \text{Sin}[c+d x]-238 \text{Sin}[3 (c+d x)]-42 \text{Sin}[5 (c+d x)]\right)\right)$$

Problem 123: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^7}{(a+i a \text{Tan}[c+d x])^2} \, dx$$

Optimal (type 3, 100 leaves, 4 steps):

$$\frac{5 \text{ArcTanh}[\text{Sin}[c+d x]]}{8 a^2 d}+\frac{5 \text{Sec}[c+d x] \text{Tan}[c+d x]}{8 a^2 d}+\frac{5 \text{Sec}[c+d x]^3 \text{Tan}[c+d x]}{12 a^2 d}-\frac{2 i \text{Sec}[c+d x]^5}{3 d \left(a^2+i a^2 \text{Tan}[c+d x]\right)}$$

Result (type 3, 215 leaves):

$$-\frac{1}{192\,a^2\,d}\,\text{Sec}[c+d\,x]^4\left(128\,\mathrm{i}\,\text{Cos}[c+d\,x]+45\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]+60\,\text{Cos}[2\,(c+d\,x)]\left(\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]-\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]\right)+15\,\text{Cos}[4\,(c+d\,x)]\left(\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]-\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]\right)-45\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]+18\,\text{Sin}[c+d\,x]-30\,\text{Sin}[3\,(c+d\,x)]\right)$$

Problem 125: Result more than twice size of optimal antiderivative.

$$\int\frac{\text{Sec}[c+d\,x]^3}{(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^2}\,dx$$

Optimal (type 3, 48 leaves, 2 steps):

$$-\frac{\text{ArcTanh}[\text{Sin}[c+d\,x]]}{a^2\,d}+\frac{2\,\mathrm{i}\,\text{Sec}[c+d\,x]}{d\,(a^2+\mathrm{i}\,a^2\,\text{Tan}[c+d\,x])}$$

Result (type 3, 184 leaves):

$$-\left(\left(\text{Sec}[c+d\,x]^2\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]\left(2\,\mathrm{i}+\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]-\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]\right)+\left(2+\mathrm{i}\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]-\mathrm{i}\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]\right)\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\left(\text{Cos}\left[\frac{3}{2}\,(c+d\,x)\right]+\mathrm{i}\,\text{Sin}\left[\frac{3}{2}\,(c+d\,x)\right]\right)\right)\Big/\left(a^2\,d\,(-\mathrm{i}+\text{Tan}[c+d\,x])^2\right)\right)$$

Problem 133: Result more than twice size of optimal antiderivative.

$$\int\frac{\text{Sec}[c+d\,x]^8}{(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^3}\,dx$$

Optimal (type 3, 27 leaves, 2 steps):

$$\frac{\mathrm{i}\,(a-\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4}{4\,a^7\,d}$$

Result (type 3, 84 leaves):

$$\frac{1}{4 a^3 d}\text{Sec}[c]\,\text{Sec}[c+d x]^4 \left(-3 i \text{Cos}[c]-2 i \text{Cos}[c+2 d x]-2 i \text{Cos}[3 c+2 d x]-3 \text{Sin}[c]+2 \text{Sin}[c+2 d x]-2 \text{Sin}[3 c+2 d x]+\text{Sin}[3 c+4 d x]\right)$$

Problem 149: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^{12}}{(a+i a \text{Tan}[c+d x])^4}\,dx$$

Optimal (type 3, 55 leaves, 3 steps):

$$\frac{i (a-i a \text{Tan}[c+d x])^6}{3 a^{10} d}-\frac{i (a-i a \text{Tan}[c+d x])^7}{7 a^{11} d}$$

Result (type 3, 127 leaves):

$$\frac{1}{84 a^4 d}\text{Sec}[c]\,\text{Sec}[c+d x]^7 \left(-35 i \text{Cos}[d x]-35 i \text{Cos}[2 c+d x]-21 i \text{Cos}[2 c+3 d x]-21 i \text{Cos}[4 c+3 d x]+35 \text{Sin}[d x]-35 \text{Sin}[2 c+d x]+21 \text{Sin}[2 c+3 d x]-21 \text{Sin}[4 c+3 d x]+14 \text{Sin}[4 c+5 d x]+2 \text{Sin}[6 c+7 d x]\right)$$

Problem 150: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^{10}}{(a+i a \text{Tan}[c+d x])^4}\,dx$$

Optimal (type 3, 27 leaves, 2 steps):

$$\frac{i (a-i a \text{Tan}[c+d x])^5}{5 a^9 d}$$

Result (type 3, 116 leaves):

$$\frac{1}{10 a^4 d}\text{Sec}[c]\,\text{Sec}[c+d x]^5 \left(-10 i \text{Cos}[d x]-10 i \text{Cos}[2 c+d x]-5 i \text{Cos}[2 c+3 d x]-5 i \text{Cos}[4 c+3 d x]+10 \text{Sin}[d x]-10 \text{Sin}[2 c+d x]+5 \text{Sin}[2 c+3 d x]-5 \text{Sin}[4 c+3 d x]+2 \text{Sin}[4 c+5 d x]\right)$$

Problem 152: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^6}{(a+i a \text{Tan}[c+d x])^4}\,dx$$

Optimal (type 3, 63 leaves, 3 steps):

$$-\frac{4 x}{a^4}-\frac{4 i \text{Log}[\text{Cos}[c+d x]]}{a^4 d}+\frac{\text{Tan}[c+d x]}{a^4 d}+\frac{4 i}{d \left(a^4+i a^4 \text{Tan}[c+d x]\right)}$$

Result (type 3, 214 leaves):

$$\frac{1}{2 a^4 d} \text{Sec}[c] \,\text{Sec}[c+d x] \left(-\text{Cos}[c+d x]+i \,\text{Sin}[c+d x]\right) \left(-i \,\text{Cos}[3 c+2 d x]+2 d x \,\text{Cos}[3 c+2 d x]+2 \,\text{Cos}[c+2 d x] \left(d x+i \,\text{Log}[\text{Cos}[c+d x]]\right)+\text{Cos}[c] \left(-3 i+4 d x+4 i \,\text{Log}[\text{Cos}[c+d x]]\right)+2 i \,\text{Cos}[3 c+2 d x] \,\text{Log}[\text{Cos}[c+d x]]+\text{Sin}[c]-2 \,\text{Sin}[c+2 d x]+2 i d x \,\text{Sin}[c+2 d x]-2 \,\text{Log}[\text{Cos}[c+d x]] \,\text{Sin}[c+2 d x]-\text{Sin}[3 c+2 d x]+2 i d x \,\text{Sin}[3 c+2 d x]-2 \,\text{Log}[\text{Cos}[c+d x]] \,\text{Sin}[3 c+2 d x]\right)$$

Problem 154: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^2}{\left(a+i a \,\text{Tan}[c+d x]\right)^4} \, dx$$

Optimal (type 3, 27 leaves, 2 steps):

$$\frac{i}{3 a d \left(a+i a \,\text{Tan}[c+d x]\right)^3}$$

Result (type 3, 56 leaves):

$$\frac{i \,\text{Sec}[c+d x]^4 \left(3+4 \,\text{Cos}\left[2 \left(c+d x\right)\right]+2 i \,\text{Sin}\left[2 \left(c+d x\right)\right]\right)}{24 a^4 d \left(-i+\text{Tan}[c+d x]\right)^4}$$

Problem 159: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^7}{\left(a+i a \,\text{Tan}[c+d x]\right)^4} \, dx$$

Optimal (type 3, 107 leaves, 4 steps):

$$-\frac{15 \,\text{ArcTanh}[\text{Sin}[c+d x]]}{2 a^4 d}-\frac{15 \,\text{Sec}[c+d x] \,\text{Tan}[c+d x]}{2 a^4 d}+\frac{2 i \,\text{Sec}[c+d x]^5}{a d \left(a+i a \,\text{Tan}[c+d x]\right)^3}+\frac{10 i \,\text{Sec}[c+d x]^3}{d \left(a^4+i a^4 \,\text{Tan}[c+d x]\right)}$$

Result (type 3, 988 leaves):

$$\left(15\,\text{Cos}[4\,c]\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\,\text{Sec}[c+d\,x]^4\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^4\right)\Big/\left(2\,d\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4\right)-$$
$$\left(15\,\text{Cos}[4\,c]\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\,\text{Sec}[c+d\,x]^4\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^4\right)\Big/\left(2\,d\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4\right)+$$
$$\left(\text{Cos}[d\,x]\,\text{Sec}[c+d\,x]^4\,(8\,\mathrm{i}\,\text{Cos}[3\,c]-8\,\text{Sin}[3\,c])\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^4\right)\Big/\left(d\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4\right)+$$
$$\left(\text{Sec}[c]\,\text{Sec}[c+d\,x]^4\,(4\,\mathrm{i}\,\text{Cos}[4\,c]-4\,\text{Sin}[4\,c])\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^4\right)\Big/\left(d\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4\right)+$$
$$\left(15\,\mathrm{i}\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\,\text{Sec}[c+d\,x]^4\,\text{Sin}[4\,c]\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^4\right)\Big/\left(2\,d\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4\right)-$$
$$\left(15\,\mathrm{i}\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\,\text{Sec}[c+d\,x]^4\,\text{Sin}[4\,c]\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^4\right)\Big/\left(2\,d\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4\right)+$$
$$\left(\text{Sec}[c+d\,x]^4\,(8\,\text{Cos}[3\,c]+8\,\mathrm{i}\,\text{Sin}[3\,c])\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^4\,\text{Sin}[d\,x]\right)\Big/\left(d\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4\right)+\frac{\text{Sec}[c+d\,x]^4\left(\frac{1}{4}\,\text{Cos}[4\,c]+\frac{1}{4}\,\mathrm{i}\,\text{Sin}[4\,c]\right)(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^4}{d\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^2(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4}+$$
$$\frac{\text{Sec}[c+d\,x]^4\left(-\frac{1}{4}\,\text{Cos}[4\,c]-\frac{1}{4}\,\mathrm{i}\,\text{Sin}[4\,c]\right)(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^4}{d\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^2(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4}+$$
$$\left(4\,\text{Sec}[c+d\,x]^4\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^4\left(\frac{1}{2}\,\text{Cos}\left[4\,c-\frac{d\,x}{2}\right]-\frac{1}{2}\,\text{Cos}\left[4\,c+\frac{d\,x}{2}\right]+\frac{1}{2}\,\mathrm{i}\,\text{Sin}\left[4\,c-\frac{d\,x}{2}\right]-\frac{1}{2}\,\mathrm{i}\,\text{Sin}\left[4\,c+\frac{d\,x}{2}\right]\right)\right)\Big/$$
$$\left(d\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4\right)+$$
$$\left(4\,\text{Sec}[c+d\,x]^4\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^4\left(-\frac{1}{2}\,\text{Cos}\left[4\,c-\frac{d\,x}{2}\right]+\frac{1}{2}\,\text{Cos}\left[4\,c+\frac{d\,x}{2}\right]-\frac{1}{2}\,\mathrm{i}\,\text{Sin}\left[4\,c-\frac{d\,x}{2}\right]+\frac{1}{2}\,\mathrm{i}\,\text{Sin}\left[4\,c+\frac{d\,x}{2}\right]\right)\right)\Big/$$
$$\left(d\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4\right)$$

Problem 160: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d\,x]^5}{(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^4}\,dx$$

Optimal (type 3, 82 leaves, 3 steps):

$$\frac{\text{ArcTanh}[\text{Sin}[c+d x]]}{a^4 d}+\frac{2 i \text{Sec}[c+d x]^3}{3 a d (a+i a \text{Tan}[c+d x])^3}-\frac{2 i \text{Sec}[c+d x]}{d \left(a^4+i a^4 \text{Tan}[c+d x]\right)}$$

Result (type 3, 247 leaves):

$$\frac{1}{3 a^4 d (-i+\text{Tan}[c+d x])^4}\text{Sec}[c+d x]^4 (\text{Cos}[d x]+i \text{Sin}[d x])^4 \left(-3 \text{Cos}[4 c] \text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right]+\right.$$
$$3 \text{Cos}[4 c] \text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]+\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right]-2 \text{Cos}[3 d x] \text{Sin}[c]+$$
$$6 \text{Cos}[d x] \text{Sin}[3 c]-3 i \text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right] \text{Sin}[4 c]+$$
$$3 i \text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]+\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right] \text{Sin}[4 c]+\text{Cos}[3 c] (-6 i \text{Cos}[d x]-6 \text{Sin}[d x])-$$
$$\left.6 i \text{Sin}[3 c] \text{Sin}[d x]+2 i \text{Sin}[c] \text{Sin}[3 d x]+2 \text{Cos}[c] (i \text{Cos}[3 d x]+\text{Sin}[3 d x])\right)$$

Problem 166: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^{14}}{(a+i a \text{Tan}[c+d x])^8} \, dx$$

Optimal (type 3, 134 leaves, 3 steps):

$$-\frac{192 x}{a^8}-\frac{192 i \text{Log}[\text{Cos}[c+d x]]}{a^8 d}+\frac{129 \text{Tan}[c+d x]}{a^8 d}-\frac{36 i \text{Tan}[c+d x]^2}{a^8 d}-$$
$$\frac{10 \text{Tan}[c+d x]^3}{a^8 d}+\frac{2 i \text{Tan}[c+d x]^4}{a^8 d}+\frac{\text{Tan}[c+d x]^5}{5 a^8 d}+\frac{64 i}{d \left(a^8+i a^8 \text{Tan}[c+d x]\right)}$$

Result (type 3, 599 leaves):

$$\frac{1}{20 a^8 d (-i+\text{Tan}[c+d x])^8}\text{Sec}[c] \text{Sec}[c+d x]^{13} (-\text{Cos}[7 (c+d x)]-i \text{Sin}[7 (c+d x)]) (-220 i \text{Cos}[3 c+2 d x]+$$
$$900 d x \text{Cos}[3 c+2 d x]+238 i \text{Cos}[3 c+4 d x]+360 d x \text{Cos}[3 c+4 d x]-110 i \text{Cos}[5 c+4 d x]+$$
$$360 d x \text{Cos}[5 c+4 d x]+77 i \text{Cos}[5 c+6 d x]+60 d x \text{Cos}[5 c+6 d x]-10 i \text{Cos}[7 c+6 d x]+$$
$$60 d x \text{Cos}[7 c+6 d x]+10 \text{Cos}[c] (-7 i+120 d x+120 i \text{Log}[\text{Cos}[c+d x]])+$$
$$5 \text{Cos}[c+2 d x] (43 i+180 d x+180 i \text{Log}[\text{Cos}[c+d x]])+$$
$$900 i \text{Cos}[3 c+2 d x] \text{Log}[\text{Cos}[c+d x]]+360 i \text{Cos}[3 c+4 d x] \text{Log}[\text{Cos}[c+d x]]+$$
$$360 i \text{Cos}[5 c+4 d x] \text{Log}[\text{Cos}[c+d x]]+60 i \text{Cos}[5 c+6 d x] \text{Log}[\text{Cos}[c+d x]]+$$
$$60 i \text{Cos}[7 c+6 d x] \text{Log}[\text{Cos}[c+d x]]+870 \text{Sin}[c]-985 \text{Sin}[c+2 d x]+$$
$$300 i d x \text{Sin}[c+2 d x]-300 \text{Log}[\text{Cos}[c+d x]] \text{Sin}[c+2 d x]+320 \text{Sin}[3 c+2 d x]+$$
$$300 i d x \text{Sin}[3 c+2 d x]-300 \text{Log}[\text{Cos}[c+d x]] \text{Sin}[3 c+2 d x]-$$
$$512 \text{Sin}[3 c+4 d x]+240 i d x \text{Sin}[3 c+4 d x]-240 \text{Log}[\text{Cos}[c+d x]] \text{Sin}[3 c+4 d x]+$$
$$10 \text{Sin}[5 c+4 d x]+240 i d x \text{Sin}[5 c+4 d x]-240 \text{Log}[\text{Cos}[c+d x]] \text{Sin}[5 c+4 d x]-$$
$$97 \text{Sin}[5 c+6 d x]+60 i d x \text{Sin}[5 c+6 d x]-60 \text{Log}[\text{Cos}[c+d x]] \text{Sin}[5 c+6 d x]-$$
$$10 \text{Sin}[7 c+6 d x]+60 i d x \text{Sin}[7 c+6 d x]-60 \text{Log}[\text{Cos}[c+d x]] \text{Sin}[7 c+6 d x])$$

Problem 167: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^{12}}{(a+i a \text{Tan}[c+d x])^8} \, dx$$

Optimal (type 3, 126 leaves, 3 steps):

$$\frac{80 x}{a^8}+\frac{80 i \text{Log}[\text{Cos}[c+d x]]}{a^8 d}-\frac{31 \text{Tan}[c+d x]}{a^8 d}+\frac{4 i \text{Tan}[c+d x]^2}{a^8 d}+\frac{\text{Tan}[c+d x]^3}{3 a^8 d}+\frac{16 i}{d \left(a^4+i a^4 \text{Tan}[c+d x]\right)^2}-\frac{80 i}{d \left(a^8+i a^8 \text{Tan}[c+d x]\right)}$$

Result (type 3, 537 leaves):

$$\frac{1}{12 a^8 d (-i+\text{Tan}[c+d x])^8} \text{Sec}[c] \text{Sec}[c+d x]^{11} (\text{Cos}[6 (c+d x)]+i \text{Sin}[6 (c+d x)])$$
$$(66 i \text{Cos}[2 c+3 d x]+180 d x \text{Cos}[2 c+3 d x]-75 i \text{Cos}[4 c+3 d x]+$$
$$180 d x \text{Cos}[4 c+3 d x]+50 i \text{Cos}[4 c+5 d x]+60 d x \text{Cos}[4 c+5 d x]+3 i \text{Cos}[6 c+5 d x]+$$
$$60 d x \text{Cos}[6 c+5 d x]+3 \text{Cos}[2 c+d x] (-71 i+80 d x+80 i \text{Log}[\text{Cos}[c+d x]])+$$
$$\text{Cos}[d x] (-119 i+240 d x+240 i \text{Log}[\text{Cos}[c+d x]])+$$
$$180 i \text{Cos}[2 c+3 d x] \text{Log}[\text{Cos}[c+d x]]+180 i \text{Cos}[4 c+3 d x] \text{Log}[\text{Cos}[c+d x]]+$$
$$60 i \text{Cos}[4 c+5 d x] \text{Log}[\text{Cos}[c+d x]]+60 i \text{Cos}[6 c+5 d x] \text{Log}[\text{Cos}[c+d x]]-$$
$$101 \text{Sin}[d x]+120 i d x \text{Sin}[d x]-120 \text{Log}[\text{Cos}[c+d x]] \text{Sin}[d x]+$$
$$87 \text{Sin}[2 c+d x]+120 i d x \text{Sin}[2 c+d x]-120 \text{Log}[\text{Cos}[c+d x]] \text{Sin}[2 c+d x]-$$
$$96 \text{Sin}[2 c+3 d x]+180 i d x \text{Sin}[2 c+3 d x]-180 \text{Log}[\text{Cos}[c+d x]] \text{Sin}[2 c+3 d x]+$$
$$45 \text{Sin}[4 c+3 d x]+180 i d x \text{Sin}[4 c+3 d x]-180 \text{Log}[\text{Cos}[c+d x]] \text{Sin}[4 c+3 d x]-$$
$$44 \text{Sin}[4 c+5 d x]+60 i d x \text{Sin}[4 c+5 d x]-60 \text{Log}[\text{Cos}[c+d x]] \text{Sin}[4 c+5 d x]+$$
$$3 \text{Sin}[6 c+5 d x]+60 i d x \text{Sin}[6 c+5 d x]-60 \text{Log}[\text{Cos}[c+d x]] \text{Sin}[6 c+5 d x])$$

Problem 168: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^{10}}{(a+i a \text{Tan}[c+d x])^8} \, dx$$

Optimal (type 3, 116 leaves, 3 steps):

$$-\frac{8 x}{a^8}-\frac{8 i \text{Log}[\text{Cos}[c+d x]]}{a^8 d}+\frac{\text{Tan}[c+d x]}{a^8 d}+\frac{16 i}{3 a^5 d (a+i a \text{Tan}[c+d x])^3}-\frac{16 i}{d \left(a^4+i a^4 \text{Tan}[c+d x]\right)^2}+\frac{24 i}{d \left(a^8+i a^8 \text{Tan}[c+d x]\right)}$$

Result (type 3, 397 leaves):

$$\frac{1}{6 a^8 d \left(-i+\text{Tan}[c+d x]\right)^8} \text{Sec}[c] \,\text{Sec}[c+d x]^9 \left(-\text{Cos}\left[5 \left(c+d x\right)\right]-i \,\text{Sin}\left[5 \left(c+d x\right)\right]\right)$$
$$\Big(-12 i \,\text{Cos}[c]-10 i \,\text{Cos}[3 c+2 d x]+12 d x \,\text{Cos}[3 c+2 d x]+2 i \,\text{Cos}[3 c+4 d x]+$$
$$12 d x \,\text{Cos}[3 c+4 d x]-i \,\text{Cos}[5 c+4 d x]+12 d x \,\text{Cos}[5 c+4 d x]+$$
$$\text{Cos}[c+2 d x] \left(-7 i+12 d x+12 i \,\text{Log}[\text{Cos}[c+d x]]\right)+12 i \,\text{Cos}[3 c+2 d x] \,\text{Log}[\text{Cos}[c+d x]]+$$
$$12 i \,\text{Cos}[3 c+4 d x] \,\text{Log}[\text{Cos}[c+d x]]+12 i \,\text{Cos}[5 c+4 d x] \,\text{Log}[\text{Cos}[c+d x]]+$$
$$11 \,\text{Sin}[c+2 d x]+12 i d x \,\text{Sin}[c+2 d x]-12 \,\text{Log}[\text{Cos}[c+d x]] \,\text{Sin}[c+2 d x]+$$
$$14 \,\text{Sin}[3 c+2 d x]+12 i d x \,\text{Sin}[3 c+2 d x]-12 \,\text{Log}[\text{Cos}[c+d x]] \,\text{Sin}[3 c+2 d x]-$$
$$4 \,\text{Sin}[3 c+4 d x]+12 i d x \,\text{Sin}[3 c+4 d x]-12 \,\text{Log}[\text{Cos}[c+d x]] \,\text{Sin}[3 c+4 d x]-$$
$$\text{Sin}[5 c+4 d x]+12 i d x \,\text{Sin}[5 c+4 d x]-12 \,\text{Log}[\text{Cos}[c+d x]] \,\text{Sin}[5 c+4 d x]\Big)$$

Problem 172: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^2}{\left(a+i a \,\text{Tan}[c+d x]\right)^8} \, dx$$

Optimal (type 3, 27 leaves, 2 steps):

$$\frac{i}{7 a d \left(a+i a \,\text{Tan}[c+d x]\right)^7}$$

Result (type 3, 100 leaves):

$$\Big(i \,\text{Sec}[c+d x]^8$$
$$\left(35+56 \,\text{Cos}\left[2 \left(c+d x\right)\right]+28 \,\text{Cos}\left[4 \left(c+d x\right)\right]+8 \,\text{Cos}\left[6 \left(c+d x\right)\right]+14 i \,\text{Sin}\left[2 \left(c+d x\right)\right]+\right.$$
$$\left.\left.14 i \,\text{Sin}\left[4 \left(c+d x\right)\right]+6 i \,\text{Sin}\left[6 \left(c+d x\right)\right]\right)\right) \Big/ \left(896 a^8 d \left(-i+\text{Tan}[c+d x]\right)^8\right)$$

Problem 176: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^{13}}{\left(a+i a \,\text{Tan}[c+d x]\right)^8} \, dx$$

Optimal (type 3, 205 leaves, 7 steps):

$$\frac{1155 \,\text{ArcTanh}[\text{Sin}[c+d x]]}{8 a^8 d}+\frac{1155 \,\text{Sec}[c+d x] \,\text{Tan}[c+d x]}{8 a^8 d}+$$
$$\frac{385 \,\text{Sec}[c+d x]^3 \,\text{Tan}[c+d x]}{4 a^8 d}+\frac{2 i \,\text{Sec}[c+d x]^{11}}{3 a d \left(a+i a \,\text{Tan}[c+d x]\right)^7}-$$
$$\frac{22 i \,\text{Sec}[c+d x]^9}{3 a^3 d \left(a+i a \,\text{Tan}[c+d x]\right)^5}-\frac{66 i \,\text{Sec}[c+d x]^7}{a^2 d \left(a^2+i a^2 \,\text{Tan}[c+d x]\right)^3}-\frac{154 i \,\text{Sec}[c+d x]^5}{d \left(a^8+i a^8 \,\text{Tan}[c+d x]\right)}$$

Result (type 3, 1704 leaves):

$$-\left(\left(1155 \,\text{Cos}[8 c] \,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right] \text{Sec}[c+d x]^8 \left(\text{Cos}[d x]+i \,\text{Sin}[d x]\right)^8\right) \Big/\right.$$
$$\left.\left(8 d \left(a+i a \,\text{Tan}[c+d x]\right)^8\right)\right)+$$
$$\left(1155 \,\text{Cos}[8 c] \,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right] \text{Sec}[c+d x]^8 \left(\text{Cos}[d x]+i \,\text{Sin}[d x]\right)^8\right) \Big/$$

$$\left(8\,d\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8\right)+$$

$$\left(\text{Cos}[3\,d\,x]\,\text{Sec}[c+d\,x]^8\left(\frac{32}{3}\,i\,\text{Cos}[5\,c]-\frac{32}{3}\,\text{Sin}[5\,c]\right)\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8\right)\Big/$$

$$\left(d\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8\right)+$$

$$\left(\text{Cos}[d\,x]\,\text{Sec}[c+d\,x]^8\left(-160\,i\,\text{Cos}[7\,c]+160\,\text{Sin}[7\,c]\right)\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8\right)\Big/$$

$$\left(d\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8\right)-$$

$$\left(1155\,i\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\text{Sec}[c+d\,x]^8\,\text{Sin}[8\,c]\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8\right)\Big/$$

$$\left(8\,d\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8\right)+$$

$$\left(1155\,i\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\text{Sec}[c+d\,x]^8\,\text{Sin}[8\,c]\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8\right)\Big/$$

$$\left(8\,d\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8\right)+$$

$$\left(\text{Sec}[c]\,\text{Sec}[c+d\,x]^8\left(-\frac{236}{3}\,i\,\text{Cos}[8\,c]+\frac{236}{3}\,\text{Sin}[8\,c]\right)\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8\right)\Big/$$

$$\left(d\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8\right)+$$

$$\left(\text{Sec}[c+d\,x]^8\left(-160\,\text{Cos}[7\,c]-160\,i\,\text{Sin}[7\,c]\right)\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8\,\text{Sin}[d\,x]\right)\Big/$$

$$\left(d\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8\right)+$$

$$\left(\text{Sec}[c+d\,x]^8\left(\frac{32}{3}\,\text{Cos}[5\,c]+\frac{32}{3}\,i\,\text{Sin}[5\,c]\right)\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8\,\text{Sin}[3\,d\,x]\right)\Big/$$

$$\left(d\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8\right)+\frac{\text{Sec}[c+d\,x]^8\left(\frac{1}{16}\,\text{Cos}[8\,c]+\frac{1}{16}\,i\,\text{Sin}[8\,c]\right)\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8}{d\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^4\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8}-$$

$$\left(\left(\frac{1}{96}+\frac{i}{96}\right)\text{Sec}[c+d\,x]^8\left(-407\,i\,\text{Cos}\left[\frac{15\,c}{2}\right]+343\,\text{Cos}\left[\frac{17\,c}{2}\right]+407\,\text{Sin}\left[\frac{15\,c}{2}\right]+343\,i\,\text{Sin}\left[\frac{17\,c}{2}\right]\right)\right.$$

$$\left.\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8\right)\Big/$$

$$\left(d\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^2\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8\right)+$$

$$\frac{\text{Sec}[c+d\,x]^8\left(-\frac{1}{16}\,\text{Cos}[8\,c]-\frac{1}{16}\,i\,\text{Sin}[8\,c]\right)\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8}{d\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^4\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8}+$$

$$\left(\left(\frac{1}{96}+\frac{i}{96}\right)\text{Sec}[c+d\,x]^8\left(407\,\text{Cos}\left[\frac{15\,c}{2}\right]-343\,i\,\text{Cos}\left[\frac{17\,c}{2}\right]+407\,i\,\text{Sin}\left[\frac{15\,c}{2}\right]+343\,\text{Sin}\left[\frac{17\,c}{2}\right]\right)\right.$$

$$\left.\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8\right)\Big/$$

$$\left(d\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^2\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8\right)+$$

$$\left(236\,\text{Sec}[c+d\,x]^8\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^8\right.$$

$$\left.\left(\frac{1}{2}\,\text{Cos}\left[8\,c-\frac{d\,x}{2}\right]-\frac{1}{2}\,\text{Cos}\left[8\,c+\frac{d\,x}{2}\right]+\frac{1}{2}\,i\,\text{Sin}\left[8\,c-\frac{d\,x}{2}\right]-\frac{1}{2}\,i\,\text{Sin}\left[8\,c+\frac{d\,x}{2}\right]\right)\right)\Big/$$

$$\left(3\,d\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^8\right)+$$

$$\left(4\,\text{Sec}[c+d\,x]^8\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\left(\frac{1}{2}\text{Cos}\left[8\,c-\frac{d\,x}{2}\right]-\frac{1}{2}\text{Cos}\left[8\,c+\frac{d\,x}{2}\right]+\frac{1}{2}i\,\text{Sin}\left[8\,c-\frac{d\,x}{2}\right]-\frac{1}{2}i\,\text{Sin}\left[8\,c+\frac{d\,x}{2}\right]\right)\right)\Big/\left(3\,d\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^3(a+i\,a\,\text{Tan}[c+d\,x])^8\right)+$$
$$\left(4\,\text{Sec}[c+d\,x]^8\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\left(-\frac{1}{2}\text{Cos}\left[8\,c-\frac{d\,x}{2}\right]+\frac{1}{2}\text{Cos}\left[8\,c+\frac{d\,x}{2}\right]-\frac{1}{2}i\,\text{Sin}\left[8\,c-\frac{d\,x}{2}\right]+\frac{1}{2}i\,\text{Sin}\left[8\,c+\frac{d\,x}{2}\right]\right)\right)\Big/\left(3\,d\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^3(a+i\,a\,\text{Tan}[c+d\,x])^8\right)+$$
$$\left(236\,\text{Sec}[c+d\,x]^8\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\left(-\frac{1}{2}\text{Cos}\left[8\,c-\frac{d\,x}{2}\right]+\frac{1}{2}\text{Cos}\left[8\,c+\frac{d\,x}{2}\right]-\frac{1}{2}i\,\text{Sin}\left[8\,c-\frac{d\,x}{2}\right]+\frac{1}{2}i\,\text{Sin}\left[8\,c+\frac{d\,x}{2}\right]\right)\right)\Big/\left(3\,d\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)(a+i\,a\,\text{Tan}[c+d\,x])^8\right)$$

Problem 177: Result more than twice size of optimal antiderivative.

$$\int\frac{\text{Sec}[c+d\,x]^{11}}{(a+i\,a\,\text{Tan}[c+d\,x])^8}\,dx$$

Optimal (type 3, 183 leaves, 6 steps):

$$-\frac{63\,\text{ArcTanh}[\text{Sin}[c+d\,x]]}{2\,a^8\,d}-\frac{63\,\text{Sec}[c+d\,x]\,\text{Tan}[c+d\,x]}{2\,a^8\,d}+\frac{2\,i\,\text{Sec}[c+d\,x]^9}{5\,a\,d\,(a+i\,a\,\text{Tan}[c+d\,x])^7}-\frac{6\,i\,\text{Sec}[c+d\,x]^7}{5\,a^3\,d\,(a+i\,a\,\text{Tan}[c+d\,x])^5}+\frac{42\,i\,\text{Sec}[c+d\,x]^5}{5\,a^2\,d\,(a^2+i\,a^2\,\text{Tan}[c+d\,x])^3}+\frac{42\,i\,\text{Sec}[c+d\,x]^3}{d\,(a^8+i\,a^8\,\text{Tan}[c+d\,x])}$$

Result (type 3, 1244 leaves):

$$\left(63\,\text{Cos}[8\,c]\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\text{Sec}[c+d\,x]^8\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\right)\Big/\left(2\,d\,(a+i\,a\,\text{Tan}[c+d\,x])^8\right)-$$
$$\left(63\,\text{Cos}[8\,c]\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\text{Sec}[c+d\,x]^8\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\right)\Big/\left(2\,d\,(a+i\,a\,\text{Tan}[c+d\,x])^8\right)+$$
$$\left(\text{Cos}[5\,d\,x]\,\text{Sec}[c+d\,x]^8\left(\frac{8}{5}i\,\text{Cos}[3\,c]-\frac{8}{5}\text{Sin}[3\,c]\right)(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\right)\Big/\left(d\,(a+i\,a\,\text{Tan}[c+d\,x])^8\right)+$$
$$\left(\text{Cos}[3\,d\,x]\,\text{Sec}[c+d\,x]^8\,(-8\,i\,\text{Cos}[5\,c]+8\,\text{Sin}[5\,c])\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\right)\Big/\left(d\,(a+i\,a\,\text{Tan}[c+d\,x])^8\right)+$$
$$\left(\text{Cos}[d\,x]\,\text{Sec}[c+d\,x]^8\,(48\,i\,\text{Cos}[7\,c]-48\,\text{Sin}[7\,c])\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\right)\Big/\left(d\,(a+i\,a\,\text{Tan}[c+d\,x])^8\right)+$$

$$\left(\text{Sec}[c]\ \text{Sec}[c+d\,x]^8\ (8\,i\,\text{Cos}[8\,c]-8\,\text{Sin}[8\,c])\ (\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\right)\Big/\left(d\ (a+i\,a\,\text{Tan}[c+d\,x])^8\right)+$$
$$\left(63\,i\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\text{Sec}[c+d\,x]^8\,\text{Sin}[8\,c]\ (\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\right)\Big/\left(2\,d\ (a+i\,a\,\text{Tan}[c+d\,x])^8\right)-$$
$$\left(63\,i\,\text{Log}\left[\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right]\text{Sec}[c+d\,x]^8\,\text{Sin}[8\,c]\ (\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\right)\Big/\left(2\,d\ (a+i\,a\,\text{Tan}[c+d\,x])^8\right)+$$
$$\left(\text{Sec}[c+d\,x]^8\ (48\,\text{Cos}[7\,c]+48\,i\,\text{Sin}[7\,c])\ (\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\,\text{Sin}[d\,x]\right)\Big/\left(d\ (a+i\,a\,\text{Tan}[c+d\,x])^8\right)+$$
$$\left(\text{Sec}[c+d\,x]^8\ (-8\,\text{Cos}[5\,c]-8\,i\,\text{Sin}[5\,c])\ (\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\,\text{Sin}[3\,d\,x]\right)\Big/\left(d\ (a+i\,a\,\text{Tan}[c+d\,x])^8\right)+$$
$$\left(\text{Sec}[c+d\,x]^8\left(\frac{8}{5}\text{Cos}[3\,c]+\frac{8}{5}i\,\text{Sin}[3\,c]\right)(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\,\text{Sin}[5\,d\,x]\right)\Big/\left(d\ (a+i\,a\,\text{Tan}[c+d\,x])^8\right)+\frac{\text{Sec}[c+d\,x]^8\left(\frac{1}{4}\text{Cos}[8\,c]+\frac{1}{4}i\,\text{Sin}[8\,c]\right)(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8}{d\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^2(a+i\,a\,\text{Tan}[c+d\,x])^8}+$$
$$\frac{\text{Sec}[c+d\,x]^8\left(-\frac{1}{4}\text{Cos}[8\,c]-\frac{1}{4}i\,\text{Sin}[8\,c]\right)(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8}{d\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)^2(a+i\,a\,\text{Tan}[c+d\,x])^8}+$$
$$\left(8\,\text{Sec}[c+d\,x]^8\ (\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\left(\frac{1}{2}\text{Cos}\left[8\,c-\frac{d\,x}{2}\right]-\frac{1}{2}\text{Cos}\left[8\,c+\frac{d\,x}{2}\right]+\frac{1}{2}i\,\text{Sin}\left[8\,c-\frac{d\,x}{2}\right]-\frac{1}{2}i\,\text{Sin}\left[8\,c+\frac{d\,x}{2}\right]\right)\right)\Big/$$
$$\left(d\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]+\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)(a+i\,a\,\text{Tan}[c+d\,x])^8\right)+$$
$$\left(8\,\text{Sec}[c+d\,x]^8\ (\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^8\left(-\frac{1}{2}\text{Cos}\left[8\,c-\frac{d\,x}{2}\right]+\frac{1}{2}\text{Cos}\left[8\,c+\frac{d\,x}{2}\right]-\frac{1}{2}i\,\text{Sin}\left[8\,c-\frac{d\,x}{2}\right]+\frac{1}{2}i\,\text{Sin}\left[8\,c+\frac{d\,x}{2}\right]\right)\right)\Big/$$
$$\left(d\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}+\frac{d\,x}{2}\right]-\text{Sin}\left[\frac{c}{2}+\frac{d\,x}{2}\right]\right)(a+i\,a\,\text{Tan}[c+d\,x])^8\right)$$

Problem 185: Result unnecessarily involves higher level functions.

$$\int (e\,\text{Sec}[c+d\,x])^{7/2}\ (a+i\,a\,\text{Tan}[c+d\,x])\,dx$$

Optimal (type 4, 123 leaves, 5 steps):

$$-\frac{6\,a\,e^4\,\text{EllipticE}\left[\frac{1}{2}(c+d\,x),\,2\right]}{5\,d\,\sqrt{\text{Cos}[c+d\,x]}\ \sqrt{e\,\text{Sec}[c+d\,x]}}+\frac{2\,i\,a\,(e\,\text{Sec}[c+d\,x])^{7/2}}{7\,d}+$$
$$\frac{6\,a\,e^3\,\sqrt{e\,\text{Sec}[c+d\,x]}\ \text{Sin}[c+d\,x]}{5\,d}+\frac{2\,a\,e\,(e\,\text{Sec}[c+d\,x])^{5/2}\,\text{Sin}[c+d\,x]}{5\,d}$$

Result (type 5, 134 leaves):

$$\left(2\,i\,a\,e^3\,e^{-i\,(c+d\,x)}\left(21+77\,e^{2\,i\,(c+d\,x)}+103\,e^{4\,i\,(c+d\,x)}+7\,e^{6\,i\,(c+d\,x)}-21\,\left(1+e^{2\,i\,(c+d\,x)}\right)^{7/2}\,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]\right)\sqrt{e\,\text{Sec}[c+d\,x]}\right)\Big/\left(35\,d\,\left(1+e^{2\,i\,(c+d\,x)}\right)^3\right)$$

Problem 187: Result unnecessarily involves higher level functions.

$$\int (e\,\text{Sec}[c+d\,x])^{3/2}\,(a+i\,a\,\text{Tan}[c+d\,x])\,dx$$

Optimal (type 4, 90 leaves, 4 steps):

$$-\frac{2\,a\,e^2\,\text{EllipticE}\left[\frac{1}{2}\,(c+d\,x),2\right]}{d\,\sqrt{\text{Cos}[c+d\,x]}\,\sqrt{e\,\text{Sec}[c+d\,x]}}+\frac{2\,i\,a\,(e\,\text{Sec}[c+d\,x])^{3/2}}{3\,d}+\frac{2\,a\,e\,\sqrt{e\,\text{Sec}[c+d\,x]}\,\text{Sin}[c+d\,x]}{d}$$

Result (type 5, 98 leaves):

$$\left(2\,a\,e^2\,e^{-2\,i\,(c+d\,x)}\left(-4+3\,\sqrt{1+e^{2\,i\,(c+d\,x)}}\,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]-i\,\text{Tan}[c+d\,x]\right)(-i+\text{Tan}[c+d\,x])\right)\Big/\left(3\,d\,\sqrt{e\,\text{Sec}[c+d\,x]}\right)$$

Problem 189: Result unnecessarily involves higher level functions.

$$\int \frac{a+i\,a\,\text{Tan}[c+d\,x]}{\sqrt{e\,\text{Sec}[c+d\,x]}}\,dx$$

Optimal (type 4, 60 leaves, 3 steps):

$$-\frac{2\,i\,a}{d\,\sqrt{e\,\text{Sec}[c+d\,x]}}+\frac{2\,a\,\text{EllipticE}\left[\frac{1}{2}\,(c+d\,x),2\right]}{d\,\sqrt{\text{Cos}[c+d\,x]}\,\sqrt{e\,\text{Sec}[c+d\,x]}}$$

Result (type 5, 90 leaves):

$$-\left(\left(4\,i\,a\left(1+e^{2\,i\,(c+d\,x)}-\sqrt{1+e^{2\,i\,(c+d\,x)}}\,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]\right)\right)\Big/\left(d\,\left(1+e^{2\,i\,(c+d\,x)}\right)\sqrt{e\,\text{Sec}[c+d\,x]}\right)\right)$$

Problem 191: Result unnecessarily involves higher level functions.

$$\int \frac{a+i\,a\,\text{Tan}[c+d\,x]}{(e\,\text{Sec}[c+d\,x])^{5/2}}\,dx$$

Optimal (type 4, 96 leaves, 4 steps):

$$-\frac{2\,i\,a}{5\,d\,\left(e\,\mathrm{Sec}[c+d\,x]\right)^{5/2}}+\frac{6\,a\,\mathrm{EllipticE}\left[\frac{1}{2}\,(c+d\,x),\,2\right]}{5\,d\,e^2\,\sqrt{\mathrm{Cos}[c+d\,x]}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\frac{2\,a\,\mathrm{Sin}[c+d\,x]}{5\,d\,e\,\left(e\,\mathrm{Sec}[c+d\,x]\right)^{3/2}}$$

Result (type 5, 108 leaves):

$$-\left(\left(i\,a\,\left(7+8\,e^{2\,i\,(c+d\,x)}+e^{4\,i\,(c+d\,x)}-12\,\sqrt{1+e^{2\,i\,(c+d\,x)}}\;\mathrm{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]\right)\right)\Big/\left(5\,d\,e^2\,\left(1+e^{2\,i\,(c+d\,x)}\right)\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}\right)\right)$$

Problem 193: Result unnecessarily involves higher level functions.

$$\int\left(e\,\mathrm{Sec}[c+d\,x]\right)^{3/2}\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^2\,dx$$

Optimal (type 4, 138 leaves, 5 steps):

$$-\frac{14\,a^2\,e^2\,\mathrm{EllipticE}\left[\frac{1}{2}\,(c+d\,x),\,2\right]}{5\,d\,\sqrt{\mathrm{Cos}[c+d\,x]}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\frac{14\,i\,a^2\,\left(e\,\mathrm{Sec}[c+d\,x]\right)^{3/2}}{15\,d}+\frac{14\,a^2\,e\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}\;\mathrm{Sin}[c+d\,x]}{5\,d}+\frac{2\,i\,\left(e\,\mathrm{Sec}[c+d\,x]\right)^{3/2}\,\left(a^2+i\,a^2\,\mathrm{Tan}[c+d\,x]\right)}{5\,d}$$

Result (type 5, 121 leaves):

$$-\left(\left(2\,i\,a^2\,e\,e^{-i\,(c+d\,x)}\,\left(-21-56\,e^{2\,i\,(c+d\,x)}-47\,e^{4\,i\,(c+d\,x)}+21\,\left(1+e^{2\,i\,(c+d\,x)}\right)^{5/2}\;\mathrm{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]\right)\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}\right)\Big/\left(15\,d\,\left(1+e^{2\,i\,(c+d\,x)}\right)^2\right)\right)$$

Problem 195: Result unnecessarily involves higher level functions.

$$\int\frac{\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^2}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\,dx$$

Optimal (type 4, 107 leaves, 4 steps):

$$\frac{6\,a^2\,\mathrm{EllipticE}\left[\frac{1}{2}\,(c+d\,x),\,2\right]}{d\,\sqrt{\mathrm{Cos}[c+d\,x]}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}-\frac{6\,a^2\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}\;\mathrm{Sin}[c+d\,x]}{d\,e}-\frac{4\,i\,\left(a^2+i\,a^2\,\mathrm{Tan}[c+d\,x]\right)}{d\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}$$

Result (type 5, 94 leaves):

$$-\left(\left(4\,i\,a^2\,\left(3+2\,e^{2\,i\,(c+d\,x)}-3\,\sqrt{1+e^{2\,i\,(c+d\,x)}}\;\mathrm{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]\right)\right)\Big/\left(d\,\left(1+e^{2\,i\,(c+d\,x)}\right)\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}\right)\right)$$

Problem 197: Result unnecessarily involves higher level functions.

$$\int \frac{(a + i\, a \,\mathrm{Tan}[c + d\, x])^2}{(e \,\mathrm{Sec}[c + d\, x])^{5/2}} \, dx$$

Optimal (type 4, 85 leaves, 3 steps):

$$\frac{2\, a^2 \,\mathrm{EllipticE}\left[\frac{1}{2}\,(c + d\, x),\, 2\right]}{5\, d\, e^2 \sqrt{\mathrm{Cos}[c + d\, x]}\, \sqrt{e \,\mathrm{Sec}[c + d\, x]}} - \frac{4\, i\, (a^2 + i\, a^2 \,\mathrm{Tan}[c + d\, x])}{5\, d\, (e \,\mathrm{Sec}[c + d\, x])^{5/2}}$$

Result (type 5, 110 leaves):

$$-\left(\left(2\, i\, a^2 \left(2 + 3\, e^{2 i (c+d x)} + e^{4 i (c+d x)} - 2 \sqrt{1 + e^{2 i (c+d x)}}\, \mathrm{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2 i (c+d x)}\right]\right)\right) \Big/ \left(5\, d\, e^2 \left(1 + e^{2 i (c+d x)}\right) \sqrt{e \,\mathrm{Sec}[c + d\, x]}\right)\right)$$

Problem 199: Result unnecessarily involves higher level functions.

$$\int \frac{(a + i\, a \,\mathrm{Tan}[c + d\, x])^2}{(e \,\mathrm{Sec}[c + d\, x])^{9/2}} \, dx$$

Optimal (type 4, 116 leaves, 4 steps):

$$\frac{2\, a^2 \,\mathrm{EllipticE}\left[\frac{1}{2}\,(c + d\, x),\, 2\right]}{3\, d\, e^4 \sqrt{\mathrm{Cos}[c + d\, x]}\, \sqrt{e \,\mathrm{Sec}[c + d\, x]}} + \frac{2\, a^2 \,\mathrm{Sin}[c + d\, x]}{9\, d\, e^3\, (e \,\mathrm{Sec}[c + d\, x])^{3/2}} - \frac{4\, i\, (a^2 + i\, a^2 \,\mathrm{Tan}[c + d\, x])}{9\, d\, (e \,\mathrm{Sec}[c + d\, x])^{9/2}}$$

Result (type 5, 123 leaves):

$$-\left(\left(i\, a^2 \left(15 + 19\, e^{2 i (c+d x)} + 5\, e^{4 i (c+d x)} + e^{6 i (c+d x)} - 24 \sqrt{1 + e^{2 i (c+d x)}}\, \mathrm{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2 i (c+d x)}\right]\right)\right) \Big/ \left(18\, d\, e^4 \left(1 + e^{2 i (c+d x)}\right) \sqrt{e \,\mathrm{Sec}[c + d\, x]}\right)\right)$$

Problem 201: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int (e \,\mathrm{Sec}[c + d\, x])^{7/2}\, (a + i\, a \,\mathrm{Tan}[c + d\, x])^3 \, dx$$

Optimal (type 4, 202 leaves, 7 steps):

$$-\frac{2\,a^3\,e^4\,\text{EllipticE}\left[\frac{1}{2}\,(c+d\,x),\,2\right]}{d\,\sqrt{\text{Cos}[c+d\,x]}\,\sqrt{e\,\text{Sec}[c+d\,x]}}+\frac{10\,i\,a^3\,(e\,\text{Sec}[c+d\,x])^{7/2}}{21\,d}+\frac{2\,a^3\,e^3\,\sqrt{e\,\text{Sec}[c+d\,x]}\,\text{Sin}[c+d\,x]}{d}+\frac{2\,a^3\,e\,(e\,\text{Sec}[c+d\,x])^{5/2}\,\text{Sin}[c+d\,x]}{3\,d}+\frac{2\,i\,a\,(e\,\text{Sec}[c+d\,x])^{7/2}\,(a+i\,a\,\text{Tan}[c+d\,x])^2}{11\,d}+\frac{10\,i\,(e\,\text{Sec}[c+d\,x])^{7/2}\,\left(a^3+i\,a^3\,\text{Tan}[c+d\,x]\right)}{33\,d}$$

Result (type 5, 425 leaves):

$$-\left(\left(2\,i\,\sqrt{2}\,e^{-i\,(4\,c+d\,x)}\,\sqrt{\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}}\,\left(1+e^{2\,i\,(c+d\,x)}+\left(-1+e^{2\,i\,c}\right)\sqrt{1+e^{2\,i\,(c+d\,x)}}\,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]\right)(e\,\text{Sec}[c+d\,x])^{7/2}\,(a+i\,a\,\text{Tan}[c+d\,x])^3\right)\Big/\left(d\,\left(-1+e^{2\,i\,c}\right)\text{Sec}[c+d\,x]^{13/2}\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^3\right)\right)+$$
$$\frac{1}{d\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^3}\text{Cos}[c+d\,x]^6\,(e\,\text{Sec}[c+d\,x])^{7/2}\left(\text{Sec}[c+d\,x]^5\left(-\frac{2}{11}\,i\,\text{Cos}[3\,c]-\frac{2}{11}\,\text{Sin}[3\,c]\right)+\text{Cos}[d\,x]\,\text{Csc}[c]\,(2\,\text{Cos}[3\,c]-2\,i\,\text{Sin}[3\,c])+\text{Sec}[c]\,\text{Sec}[c+d\,x]^3\,(12\,\text{Cos}[c]+7\,i\,\text{Sin}[c])\left(\frac{2}{21}\,i\,\text{Cos}[3\,c]+\frac{2}{21}\,\text{Sin}[3\,c]\right)+\text{Sec}[c]\,\text{Sec}[c+d\,x]^2\left(\frac{2}{3}\,\text{Cos}[3\,c]-\frac{2}{3}\,i\,\text{Sin}[3\,c]\right)\text{Sin}[d\,x]+\text{Sec}[c]\,\text{Sec}[c+d\,x]^4\left(-\frac{2}{3}\,\text{Cos}[3\,c]+\frac{2}{3}\,i\,\text{Sin}[3\,c]\right)\text{Sin}[d\,x]+\text{Sec}[c+d\,x]\left(\frac{2}{3}\,\text{Cos}[3\,c]-\frac{2}{3}\,i\,\text{Sin}[3\,c]\right)\text{Tan}[c]\right)(a+i\,a\,\text{Tan}[c+d\,x])^3$$

Problem 203: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int (e\,\text{Sec}[c+d\,x])^{3/2}\,(a+i\,a\,\text{Tan}[c+d\,x])^3\,dx$$

Optimal (type 4, 175 leaves, 6 steps):

$$-\frac{22\,a^3\,e^2\,\text{EllipticE}\left[\frac{1}{2}\,(c+d\,x),\,2\right]}{5\,d\,\sqrt{\text{Cos}[c+d\,x]}\,\sqrt{e\,\text{Sec}[c+d\,x]}}+\frac{22\,i\,a^3\,(e\,\text{Sec}[c+d\,x])^{3/2}}{15\,d}+\frac{22\,a^3\,e\,\sqrt{e\,\text{Sec}[c+d\,x]}\,\text{Sin}[c+d\,x]}{5\,d}+\frac{2\,i\,a\,(e\,\text{Sec}[c+d\,x])^{3/2}\,(a+i\,a\,\text{Tan}[c+d\,x])^2}{7\,d}+\frac{22\,i\,(e\,\text{Sec}[c+d\,x])^{3/2}\,(a^3+i\,a^3\,\text{Tan}[c+d\,x])}{35\,d}$$

Result (type 5, 367 leaves):

$$-\left(\left(22\,i\,\sqrt{2}\,e^{-i\,(4\,c+d\,x)}\,\sqrt{\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}}\,\left(1+e^{2\,i\,(c+d\,x)}+(-1+e^{2\,i\,c})\,\sqrt{1+e^{2\,i\,(c+d\,x)}}\,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]\right)\,(e\,\text{Sec}[c+d\,x])^{3/2}\,(a+i\,a\,\text{Tan}[c+d\,x])^3\right)\Big/\left(5\,d\,(-1+e^{2\,i\,c})\,\text{Sec}[c+d\,x]^{9/2}\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^3\right)\right)+$$
$$\frac{1}{d\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^3}\text{Cos}[c+d\,x]^4\,(e\,\text{Sec}[c+d\,x])^{3/2}\left(\text{Sec}[c+d\,x]^3\left(-\frac{2}{7}\,i\,\text{Cos}[3\,c]-\frac{2}{7}\,\text{Sin}[3\,c]\right)+\text{Cos}[d\,x]\,\text{Csc}[c]\left(\frac{22}{5}\,\text{Cos}[3\,c]-\frac{22}{5}\,i\,\text{Sin}[3\,c]\right)+\text{Sec}[c]\,\text{Sec}[c+d\,x]\,(20\,\text{Cos}[c]+9\,i\,\text{Sin}[c])\left(\frac{2}{15}\,i\,\text{Cos}[3\,c]+\frac{2}{15}\,\text{Sin}[3\,c]\right)+\text{Sec}[c]\,\text{Sec}[c+d\,x]^2\left(-\frac{6}{5}\,\text{Cos}[3\,c]+\frac{6}{5}\,i\,\text{Sin}[3\,c]\right)\text{Sin}[d\,x]\right)\,(a+i\,a\,\text{Tan}[c+d\,x])^3$$

Problem 205: Result unnecessarily involves higher level functions.

$$\int\frac{(a+i\,a\,\text{Tan}[c+d\,x])^3}{\sqrt{e\,\text{Sec}[c+d\,x]}}\,dx$$

Optimal (type 4, 124 leaves, 5 steps):

$$-\frac{26\,i\,a^3}{3\,d\,\sqrt{e\,\text{Sec}[c+d\,x]}}+\frac{14\,a^3\,\text{EllipticE}\left[\frac{1}{2}\,(c+d\,x),\,2\right]}{d\,\sqrt{\text{Cos}[c+d\,x]}\,\sqrt{e\,\text{Sec}[c+d\,x]}}-\frac{6\,a^3\,\text{Tan}[c+d\,x]}{d\,\sqrt{e\,\text{Sec}[c+d\,x]}}-\frac{2\,i\,a^3\,\text{Tan}[c+d\,x]^2}{3\,d\,\sqrt{e\,\text{Sec}[c+d\,x]}}$$

Result (type 5, 109 leaves):

$$\left(i\,a^3\,\text{Sec}[c+d\,x]^2\left(-35-33\,\text{Cos}[2\,(c+d\,x)]+21\,e^{-2\,i\,(c+d\,x)}\,(1+e^{2\,i\,(c+d\,x)})^{3/2}\,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]+9\,i\,\text{Sin}[2\,(c+d\,x)]\right)\right)\Big/\left(3\,d\,\sqrt{e\,\text{Sec}[c+d\,x]}\right)$$

Problem 207: Result unnecessarily involves higher level functions.

$$\int \frac{(a + i a \operatorname{Tan}[c + d x])^3}{(e \operatorname{Sec}[c + d x])^{5/2}} \, dx$$

Optimal (type 4, 111 leaves, 4 steps):

$$\frac{6 i a^3}{5 d e^2 \sqrt{e \operatorname{Sec}[c + d x]}} - \frac{6 a^3 \operatorname{EllipticE}\left[\frac{1}{2} (c + d x), 2\right]}{5 d e^2 \sqrt{\operatorname{Cos}[c + d x]} \sqrt{e \operatorname{Sec}[c + d x]}} - \frac{4 i a (a + i a \operatorname{Tan}[c + d x])^2}{5 d (e \operatorname{Sec}[c + d x])^{5/2}}$$

Result (type 5, 110 leaves):

$$-\left(\left(4 i a^3 \left(-3 - 2 e^{2 i (c+d x)} + e^{4 i (c+d x)} + 3 \sqrt{1 + e^{2 i (c+d x)}} \operatorname{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2 i (c+d x)}\right]\right)\right) \Big/ \left(5 d e^2 \left(1 + e^{2 i (c+d x)}\right) \sqrt{e \operatorname{Sec}[c + d x]}\right)\right)$$

Problem 209: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \frac{(a + i a \operatorname{Tan}[c + d x])^3}{(e \operatorname{Sec}[c + d x])^{9/2}} \, dx$$

Optimal (type 4, 124 leaves, 4 steps):

$$\frac{2 a^3 \operatorname{EllipticE}\left[\frac{1}{2} (c + d x), 2\right]}{15 d e^4 \sqrt{\operatorname{Cos}[c + d x]} \sqrt{e \operatorname{Sec}[c + d x]}} - \frac{2 i (a + i a \operatorname{Tan}[c + d x])^3}{9 d (e \operatorname{Sec}[c + d x])^{9/2}} - \frac{4 i \left(a^3 + i a^3 \operatorname{Tan}[c + d x]\right)}{15 d e^2 (e \operatorname{Sec}[c + d x])^{5/2}}$$

Result (type 5, 371 leaves):

$$\left(2\,i\,\sqrt{2}\,e^{-i\,(4\,c+d\,x)}\,\sqrt{\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}}\right.$$
$$\left(1+e^{2\,i\,(c+d\,x)}+\left(-1+e^{2\,i\,c}\right)\sqrt{1+e^{2\,i\,(c+d\,x)}}\;\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]\right)$$
$$\left.\text{Sec}[c+d\,x]^{3/2}\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^3\right)\Big/$$
$$\left(15\,d\left(-1+e^{2\,i\,c}\right)\left(e\,\text{Sec}[c+d\,x]\right)^{9/2}\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^3\right)+\left(\text{Sec}[c+d\,x]^2\right.$$
$$\left(-\frac{8}{45}\,i\,\text{Cos}[3\,d\,x]+\text{Cos}[d\,x]\,\text{Csc}[c]\,\left(12\,\text{Cos}[c]+11\,i\,\text{Sin}[c]\right)\left(-\frac{1}{90}\,\text{Cos}[2\,c]+\frac{1}{90}\,i\,\text{Sin}[2\,c]\right)+\right.$$
$$\text{Cos}[5\,d\,x]\left(-\frac{1}{18}\,i\,\text{Cos}[2\,c]+\frac{1}{18}\,\text{Sin}[2\,c]\right)+\left(\frac{23}{90}\,\text{Cos}[2\,c]-\frac{23}{90}\,i\,\text{Sin}[2\,c]\right)\text{Sin}[d\,x]+$$
$$\left.\left.\frac{8}{45}\,\text{Sin}[3\,d\,x]+\left(\frac{1}{18}\,\text{Cos}[2\,c]+\frac{1}{18}\,i\,\text{Sin}[2\,c]\right)\text{Sin}[5\,d\,x]\right)\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^3\right)\Big/$$
$$\left(d\left(e\,\text{Sec}[c+d\,x]\right)^{9/2}\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^3\right)$$

Problem 211: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int\frac{\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^3}{\left(e\,\text{Sec}[c+d\,x]\right)^{13/2}}\,dx$$

Optimal (type 4, 155 leaves, 5 steps):

$$\frac{14\,a^3\,\text{EllipticE}\left[\frac{1}{2}\left(c+d\,x\right),2\right]}{39\,d\,e^6\,\sqrt{\text{Cos}[c+d\,x]}\,\sqrt{e\,\text{Sec}[c+d\,x]}}+\frac{14\,a^3\,\text{Sin}[c+d\,x]}{117\,d\,e^5\left(e\,\text{Sec}[c+d\,x]\right)^{3/2}}-$$
$$\frac{2\,i\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^3}{13\,d\left(e\,\text{Sec}[c+d\,x]\right)^{13/2}}-\frac{28\,i\left(a^3+i\,a^3\,\text{Tan}[c+d\,x]\right)}{117\,d\,e^2\left(e\,\text{Sec}[c+d\,x]\right)^{9/2}}$$

Result (type 5, 437 leaves):

$$\left(14\, i \sqrt{2}\, e^{-i (4 c+d x)} \sqrt{\frac{e^{i (c+d x)}}{1+e^{2 i (c+d x)}}} \left(1+e^{2 i (c+d x)}+\left(-1+e^{2 i c}\right) \sqrt{1+e^{2 i (c+d x)}}\, \text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2 i (c+d x)}\right]\right) \text{Sec}[c+d x]^{7/2} (a+i a \text{Tan}[c+d x])^3\right) \Big/ \left(39 d \left(-1+e^{2 i c}\right) (e \text{Sec}[c+d x])^{13/2} (\text{Cos}[d x]+i \text{Sin}[d x])^3\right)+$$

$$\frac{1}{d (e \text{Sec}[c+d x])^{13/2} (\text{Cos}[d x]+i \text{Sin}[d x])^3} \text{Sec}[c+d x]^4 \left(-\frac{31}{234} i \text{Cos}[3 d x]+\text{Cos}[5 d x] \left(-\frac{25}{468} i \text{Cos}[2 c]+\frac{25}{468} \text{Sin}[2 c]\right)+\text{Cos}[d x] \text{Csc}[c] (253+419 \text{Cos}[2 c]+185 i \text{Sin}[2 c]) \left(-\frac{\text{Cos}[3 c]}{1872}+\frac{i \text{Sin}[3 c]}{1872}\right)+\text{Cos}[7 d x] \left(-\frac{1}{104} i \text{Cos}[4 c]+\frac{1}{104} \text{Sin}[4 c]\right)+(419 \text{Cos}[c]+185 i \text{Sin}[c]) \left(\frac{1}{936} \text{Cos}[3 c]-\frac{1}{936} i \text{Sin}[3 c]\right) \text{Sin}[d x]+\frac{31}{234} \text{Sin}[3 d x]+\left(\frac{25}{468} \text{Cos}[2 c]+\frac{25}{468} i \text{Sin}[2 c]\right) \text{Sin}[5 d x]+\left(\frac{1}{104} \text{Cos}[4 c]+\frac{1}{104} i \text{Sin}[4 c]\right) \text{Sin}[7 d x]\right) (a+i a \text{Tan}[c+d x])^3$$

Problem 213: Result unnecessarily involves higher level functions.

$$\int (e \text{Sec}[c+d x])^{3/2} (a+i a \text{Tan}[c+d x])^4 \, dx$$

Optimal (type 4, 215 leaves, 7 steps):

$$-\frac{22 a^4 e^2 \text{EllipticE}\left[\frac{1}{2} (c+d x),2\right]}{3 d \sqrt{\text{Cos}[c+d x]} \sqrt{e \text{Sec}[c+d x]}}+\frac{22 i a^4 (e \text{Sec}[c+d x])^{3/2}}{9 d}+\frac{22 a^4 e \sqrt{e \text{Sec}[c+d x]}\, \text{Sin}[c+d x]}{3 d}+\frac{2 i a (e \text{Sec}[c+d x])^{3/2} (a+i a \text{Tan}[c+d x])^3}{9 d}+\frac{10 i (e \text{Sec}[c+d x])^{3/2} \left(a^2+i a^2 \text{Tan}[c+d x]\right)^2}{21 d}+\frac{22 i (e \text{Sec}[c+d x])^{3/2} \left(a^4+i a^4 \text{Tan}[c+d x]\right)}{21 d}$$

Result (type 5, 414 leaves):

$$-\left(\left(\left(22\,i\,\sqrt{2}\,e^{-i\,(5\,c+d\,x)}\,\sqrt{\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}}\right.\right.\right.$$
$$\left(1+e^{2\,i\,(c+d\,x)}+\left(-1+e^{2\,i\,c}\right)\sqrt{1+e^{2\,i\,(c+d\,x)}}\;\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]\right)$$
$$\left.(e\,\text{Sec}[c+d\,x])^{3/2}\,(a+i\,a\,\text{Tan}[c+d\,x])^4\right)\Big/$$
$$\left.\left(3\,d\,\left(-1+e^{2\,i\,c}\right)\text{Sec}[c+d\,x]^{11/2}\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^4\right)\right)+$$
$$\frac{1}{d\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^4}\text{Cos}[c+d\,x]^5\,(e\,\text{Sec}[c+d\,x])^{3/2}$$
$$\left(\text{Sec}[c]\,\text{Sec}[c+d\,x]^3\,(36\,\text{Cos}[c]+7\,i\,\text{Sin}[c])\left(-\frac{2}{63}\,i\,\text{Cos}[4\,c]-\frac{2}{63}\,\text{Sin}[4\,c]\right)+\right.$$
$$\text{Cos}[d\,x]\,\text{Csc}[c]\left(\frac{22}{3}\,\text{Cos}[4\,c]-\frac{22}{3}\,i\,\text{Sin}[4\,c]\right)+\text{Sec}[c]\,\text{Sec}[c+d\,x]\,(24\,\text{Cos}[c]+13\,i\,\text{Sin}[c])$$
$$\left(\frac{2}{9}\,i\,\text{Cos}[4\,c]+\frac{2}{9}\,\text{Sin}[4\,c]\right)+\text{Sec}[c]\,\text{Sec}[c+d\,x]^4\left(\frac{2}{9}\,\text{Cos}[4\,c]-\frac{2}{9}\,i\,\text{Sin}[4\,c]\right)\text{Sin}[d\,x]+$$
$$\left.\text{Sec}[c]\,\text{Sec}[c+d\,x]^2\left(-\frac{26}{9}\,\text{Cos}[4\,c]+\frac{26}{9}\,i\,\text{Sin}[4\,c]\right)\text{Sin}[d\,x]\right)(a+i\,a\,\text{Tan}[c+d\,x])^4$$

Problem 215: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int\frac{(a+i\,a\,\text{Tan}[c+d\,x])^4}{\sqrt{e\,\text{Sec}[c+d\,x]}}\,dx$$

Optimal (type 4, 178 leaves, 6 steps):

$$\frac{154\,a^4\,\text{EllipticE}\left[\frac{1}{2}\,(c+d\,x),2\right]}{5\,d\,\sqrt{\text{Cos}[c+d\,x]}\,\sqrt{e\,\text{Sec}[c+d\,x]}}-$$
$$\frac{154\,i\,a^4\,(e\,\text{Sec}[c+d\,x])^{3/2}}{15\,d\,e^2}-\frac{154\,a^4\,\sqrt{e\,\text{Sec}[c+d\,x]}\,\text{Sin}[c+d\,x]}{5\,d\,e}-$$
$$\frac{4\,i\,a\,(a+i\,a\,\text{Tan}[c+d\,x])^3}{d\,\sqrt{e\,\text{Sec}[c+d\,x]}}-\frac{22\,i\,(e\,\text{Sec}[c+d\,x])^{3/2}\,\left(a^4+i\,a^4\,\text{Tan}[c+d\,x]\right)}{5\,d\,e^2}$$

Result (type 5, 370 leaves):

$$\left(154\, i \sqrt{2}\, e^{-i (5 c+d x)} \sqrt{\frac{e^{i (c+d x)}}{1+e^{2 i (c+d x)}}} \left(1+e^{2 i (c+d x)}+\left(-1+e^{2 i c}\right) \sqrt{1+e^{2 i (c+d x)}}\ \text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2 i (c+d x)}\right]\right) (a+i\, a\, \text{Tan}[c+d x])^4\right) \Big/ \left(5\, d \left(-1+e^{2 i c}\right) \text{Sec}[c+d x]^{7/2} \sqrt{e\, \text{Sec}[c+d x]}\, (\text{Cos}[d x]+i\, \text{Sin}[d x])^4\right)+$$

$$\frac{1}{d \sqrt{e\, \text{Sec}[c+d x]}\, (\text{Cos}[d x]+i\, \text{Sin}[d x])^4} \text{Cos}[c+d x]^3 \left(\text{Cos}[d x]\, \text{Csc}[c]\, (77\, \text{Cos}[c]-37\, i\, \text{Sin}[c]) \left(-\frac{2}{5} \text{Cos}[3 c]+\frac{2}{5} i\, \text{Sin}[3 c]\right)+\text{Sec}[c]\, \text{Sec}[c+d x]\, (20\, \text{Cos}[c]+3\, i\, \text{Sin}[c]) \left(-\frac{2}{15} i\, \text{Cos}[4 c]-\frac{2}{15} \text{Sin}[4 c]\right)+(16\, \text{Cos}[3 c]-16\, i\, \text{Sin}[3 c])\, \text{Sin}[d x]+\text{Sec}[c]\, \text{Sec}[c+d x]^2 \left(\frac{2}{5} \text{Cos}[4 c]-\frac{2}{5} i\, \text{Sin}[4 c]\right) \text{Sin}[d x]\right) (a+i\, a\, \text{Tan}[c+d x])^4$$

Problem 217: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \frac{(a+i\, a\, \text{Tan}[c+d x])^4}{(e\, \text{Sec}[c+d x])^{5/2}}\, dx$$

Optimal (type 4, 156 leaves, 5 steps):

$$-\frac{42\, a^4\, \text{EllipticE}\left[\frac{1}{2} (c+d x), 2\right]}{5\, d\, e^2 \sqrt{\text{Cos}[c+d x]} \sqrt{e\, \text{Sec}[c+d x]}}+\frac{42\, a^4 \sqrt{e\, \text{Sec}[c+d x]}\, \text{Sin}[c+d x]}{5\, d\, e^3}-\frac{4\, i\, a\, (a+i\, a\, \text{Tan}[c+d x])^3}{5\, d\, (e\, \text{Sec}[c+d x])^{5/2}}+\frac{28\, i\, \left(a^4+i\, a^4\, \text{Tan}[c+d x]\right)}{5\, d\, e^2 \sqrt{e\, \text{Sec}[c+d x]}}$$

Result (type 5, 341 leaves):

$$-\left(\left(\left(42\,\mathrm{i}\,\sqrt{2}\,e^{-\mathrm{i}\,(5\,c+d\,x)}\,\sqrt{\frac{e^{\mathrm{i}\,(c+d\,x)}}{1+e^{2\,\mathrm{i}\,(c+d\,x)}}}\right.\right.\right.$$

$$\left(1+e^{2\,\mathrm{i}\,(c+d\,x)}+\left(-1+e^{2\,\mathrm{i}\,c}\right)\sqrt{1+e^{2\,\mathrm{i}\,(c+d\,x)}}\;\mathrm{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,\mathrm{i}\,(c+d\,x)}\right]\right)$$

$$\left.(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x])^4\right)\Big/$$

$$\left.\left(5\,d\left(-1+e^{2\,\mathrm{i}\,c}\right)\mathrm{Sec}[c+d\,x]^{3/2}\,(e\,\mathrm{Sec}[c+d\,x])^{5/2}\,(\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x])^4\right)\right)+$$

$$\left(\mathrm{Cos}[c+d\,x]\left(\mathrm{Cos}[3\,d\,x]\left(-\frac{4}{5}\,\mathrm{i}\,\mathrm{Cos}[c]-\frac{4\,\mathrm{Sin}[c]}{5}\right)+\right.\right.$$

$$\mathrm{Cos}[d\,x]\,\mathrm{Csc}[c]\,(3\,\mathrm{Cos}[c]-\mathrm{i}\,\mathrm{Sin}[c])\left(\frac{14}{5}\,\mathrm{Cos}[3\,c]-\frac{14}{5}\,\mathrm{i}\,\mathrm{Sin}[3\,c]\right)+$$

$$\left.\left(-\frac{28}{5}\,\mathrm{Cos}[3\,c]+\frac{28}{5}\,\mathrm{i}\,\mathrm{Sin}[3\,c]\right)\mathrm{Sin}[d\,x]+\left(\frac{4\,\mathrm{Cos}[c]}{5}-\frac{4}{5}\,\mathrm{i}\,\mathrm{Sin}[c]\right)\mathrm{Sin}[3\,d\,x]\right)$$

$$\left.(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x])^4\right)\Big/\left(d\,(e\,\mathrm{Sec}[c+d\,x])^{5/2}\,(\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x])^4\right)$$

Problem 219: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int\frac{(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x])^4}{(e\,\mathrm{Sec}[c+d\,x])^{9/2}}\,dx$$

Optimal (type 4, 125 leaves, 4 steps):

$$-\frac{2\,a^4\,\mathrm{EllipticE}\left[\frac{1}{2}\,(c+d\,x),2\right]}{15\,d\,e^4\,\sqrt{\mathrm{Cos}[c+d\,x]}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}-\frac{4\,\mathrm{i}\,a\,(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x])^3}{9\,d\,(e\,\mathrm{Sec}[c+d\,x])^{9/2}}+\frac{4\,\mathrm{i}\,\left(a^4+\mathrm{i}\,a^4\,\mathrm{Tan}[c+d\,x]\right)}{15\,d\,e^2\,(e\,\mathrm{Sec}[c+d\,x])^{5/2}}$$

Result (type 5, 383 leaves):

$$-\left(\left(2\,i\,\sqrt{2}\,e^{-i\,(5c+dx)}\,\sqrt{\frac{e^{i\,(c+dx)}}{1+e^{2\,i\,(c+dx)}}}\left(1+e^{2\,i\,(c+dx)}+\left(-1+e^{2\,i\,c}\right)\sqrt{1+e^{2\,i\,(c+dx)}}\;\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+dx)}\right]\right)\sqrt{\text{Sec}[c+dx]}\,\left(a+i\,a\,\text{Tan}[c+dx]\right)^4\right)\Big/\left(15\,d\,\left(-1+e^{2\,i\,c}\right)\left(e\,\text{Sec}[c+dx]\right)^{9/2}\left(\text{Cos}[dx]+i\,\text{Sin}[dx]\right)^4\right)\right)+$$

$$\frac{1}{d\,\left(e\,\text{Sec}[c+dx]\right)^{9/2}\left(\text{Cos}[dx]+i\,\text{Sin}[dx]\right)^4}\,\text{Sec}[c+dx]\left(\text{Cos}[3dx]\left(-\frac{7}{45}\,i\,\text{Cos}[c]-\frac{7\,\text{Sin}[c]}{45}\right)+\text{Cos}[5dx]\left(-\frac{1}{9}\,i\,\text{Cos}[c]+\frac{\text{Sin}[c]}{9}\right)+\text{Cos}[dx]\,\text{Csc}[c]\left(3\,\text{Cos}[c]-i\,\text{Sin}[c]\right)\left(\frac{2}{45}\,\text{Cos}[3c]-\frac{2}{45}\,i\,\text{Sin}[3c]\right)+\left(-\frac{4}{45}\,\text{Cos}[3c]+\frac{4}{45}\,i\,\text{Sin}[3c]\right)\text{Sin}[dx]+\left(\frac{7\,\text{Cos}[c]}{45}-\frac{7}{45}\,i\,\text{Sin}[c]\right)\text{Sin}[3dx]+\left(\frac{\text{Cos}[c]}{9}+\frac{1}{9}\,i\,\text{Sin}[c]\right)\text{Sin}[5dx]\right)\left(a+i\,a\,\text{Tan}[c+dx]\right)^4$$

Problem 221: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int\frac{\left(a+i\,a\,\text{Tan}[c+dx]\right)^4}{\left(e\,\text{Sec}[c+dx]\right)^{13/2}}\,dx$$

Optimal (type 4, 156 leaves, 5 steps):

$$\frac{2\,a^4\,\text{EllipticE}\left[\frac{1}{2}\,(c+dx),2\right]}{39\,d\,e^6\,\sqrt{\text{Cos}[c+dx]}\,\sqrt{e\,\text{Sec}[c+dx]}}+\frac{2\,a^4\,\text{Sin}[c+dx]}{117\,d\,e^5\,\left(e\,\text{Sec}[c+dx]\right)^{3/2}}-\frac{4\,i\,a\,\left(a+i\,a\,\text{Tan}[c+dx]\right)^3}{13\,d\,\left(e\,\text{Sec}[c+dx]\right)^{13/2}}-\frac{4\,i\,\left(a^4+i\,a^4\,\text{Tan}[c+dx]\right)}{117\,d\,e^2\,\left(e\,\text{Sec}[c+dx]\right)^{9/2}}$$

Result (type 5, 435 leaves):

$$\left(2\,i\,\sqrt{2}\,e^{-i\,(5\,c+d\,x)}\,\sqrt{\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}}\right.$$
$$\left(1+e^{2\,i\,(c+d\,x)}+\left(-1+e^{2\,i\,c}\right)\sqrt{1+e^{2\,i\,(c+d\,x)}}\;\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]\right)$$
$$\left.\text{Sec}[c+d\,x]^{5/2}\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^4\right)\Big/$$
$$\left(39\,d\,\left(-1+e^{2\,i\,c}\right)\,\left(e\,\text{Sec}[c+d\,x]\right)^{13/2}\,\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^4\right)+$$
$$\frac{1}{d\,\left(e\,\text{Sec}[c+d\,x]\right)^{13/2}\,\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^4}\text{Sec}[c+d\,x]^3$$
$$\left(\text{Cos}[3\,d\,x]\left(-\frac{59}{468}\,i\,\text{Cos}[c]-\frac{59\,\text{Sin}[c]}{468}\right)+\text{Cos}[5\,d\,x]\left(-\frac{37}{468}\,i\,\text{Cos}[c]+\frac{37\,\text{Sin}[c]}{468}\right)+\right.$$
$$\text{Cos}[d\,x]\,\text{Csc}[c]\,\left(24\,\text{Cos}[c]+31\,i\,\text{Sin}[c]\right)\left(-\frac{1}{468}\,\text{Cos}[3\,c]+\frac{1}{468}\,i\,\text{Sin}[3\,c]\right)+$$
$$\text{Cos}[7\,d\,x]\left(-\frac{1}{52}\,i\,\text{Cos}[3\,c]+\frac{1}{52}\,\text{Sin}[3\,c]\right)+\left(\frac{55}{468}\,\text{Cos}[3\,c]-\frac{55}{468}\,i\,\text{Sin}[3\,c]\right)\text{Sin}[d\,x]+$$
$$\left(\frac{59\,\text{Cos}[c]}{468}-\frac{59}{468}\,i\,\text{Sin}[c]\right)\text{Sin}[3\,d\,x]+\left(\frac{37\,\text{Cos}[c]}{468}+\frac{37}{468}\,i\,\text{Sin}[c]\right)\text{Sin}[5\,d\,x]+$$
$$\left.\left(\frac{1}{52}\,\text{Cos}[3\,c]+\frac{1}{52}\,i\,\text{Sin}[3\,c]\right)\text{Sin}[7\,d\,x]\right)\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^4$$

Problem 223: Result unnecessarily involves higher level functions.

$$\int\frac{\left(e\,\text{Sec}[c+d\,x]\right)^{11/2}}{a+i\,a\,\text{Tan}[c+d\,x]}\,dx$$

Optimal (type 4, 136 leaves, 5 steps):

$$-\frac{6\,e^6\,\text{EllipticE}\left[\frac{1}{2}\,(c+d\,x),2\right]}{5\,a\,d\,\sqrt{\text{Cos}[c+d\,x]}\,\sqrt{e\,\text{Sec}[c+d\,x]}}-\frac{2\,i\,e^2\,\left(e\,\text{Sec}[c+d\,x]\right)^{7/2}}{7\,a\,d}+$$
$$\frac{6\,e^5\,\sqrt{e\,\text{Sec}[c+d\,x]}\,\text{Sin}[c+d\,x]}{5\,a\,d}+\frac{2\,e^3\,\left(e\,\text{Sec}[c+d\,x]\right)^{5/2}\,\text{Sin}[c+d\,x]}{5\,a\,d}$$

Result (type 5, 128 leaves):

$$-\frac{1}{70\,a\,d}e^4\,\left(e\,\text{Sec}[c+d\,x]\right)^{3/2}\,\left(-36-28\,\text{Cos}\left[2\,(c+d\,x)\right]+\right.$$
$$21\,e^{-2\,i\,(c+d\,x)}\,\left(1+e^{2\,i\,(c+d\,x)}\right)^{5/2}\,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]+$$
$$\left.7\,i\,\text{Sec}[c+d\,x]\,\text{Sin}\left[3\,(c+d\,x)\right]+27\,i\,\text{Tan}[c+d\,x]\right)\,\left(i+\text{Tan}[c+d\,x]\right)$$

Problem 225: Result unnecessarily involves higher level functions.

$$\int \frac{(e\,\mathrm{Sec}[c+d\,x])^{7/2}}{a+i\,a\,\mathrm{Tan}[c+d\,x]}\,dx$$

Optimal (type 4, 101 leaves, 4 steps):

$$-\frac{2\,e^4\,\mathrm{EllipticE}\left[\frac{1}{2}\,(c+d\,x),\,2\right]}{a\,d\,\sqrt{\mathrm{Cos}[c+d\,x]}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}-\frac{2\,i\,e^2\,(e\,\mathrm{Sec}[c+d\,x])^{3/2}}{3\,a\,d}+\frac{2\,e^3\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}\,\mathrm{Sin}[c+d\,x]}{a\,d}$$

Result (type 5, 101 leaves):

$$\frac{1}{3\,a\,d}2\,e^3\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}\,(\mathrm{Cos}[c]-i\,\mathrm{Sin}[c])\,(\mathrm{Cos}[d\,x]-i\,\mathrm{Sin}[d\,x])$$
$$\left(2\,i-3\,i\,\sqrt{1+e^{2\,i\,(c+d\,x)}}\,\mathrm{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]+\mathrm{Tan}[c+d\,x]\right)$$

Problem 227: Result unnecessarily involves higher level functions.

$$\int \frac{(e\,\mathrm{Sec}[c+d\,x])^{3/2}}{a+i\,a\,\mathrm{Tan}[c+d\,x]}\,dx$$

Optimal (type 4, 70 leaves, 3 steps):

$$\frac{2\,i\,e^2}{a\,d\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\frac{2\,e^2\,\mathrm{EllipticE}\left[\frac{1}{2}\,(c+d\,x),\,2\right]}{a\,d\,\sqrt{\mathrm{Cos}[c+d\,x]}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}$$

Result (type 5, 74 leaves):

$$\frac{1}{a\,d}2\,i\,e\,e^{-i\,(c+d\,x)}\,\sqrt{1+e^{2\,i\,(c+d\,x)}}\,\mathrm{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}$$

Problem 229: Result unnecessarily involves higher level functions.

$$\int \frac{1}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}\,(a+i\,a\,\mathrm{Tan}[c+d\,x])}\,dx$$

Optimal (type 4, 80 leaves, 3 steps):

$$\frac{6\,\mathrm{EllipticE}\left[\frac{1}{2}\,(c+d\,x),\,2\right]}{5\,a\,d\,\sqrt{\mathrm{Cos}[c+d\,x]}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\frac{2\,i}{5\,d\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}\,(a+i\,a\,\mathrm{Tan}[c+d\,x])}$$

Result (type 5, 98 leaves):

$$-\left(\left(\left(2+2\,\mathrm{Cos}[2\,(c+d\,x)]-6\,\sqrt{1+e^{2\,i\,(c+d\,x)}}\,\mathrm{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]+\right.\right.\right.$$
$$\left.\left.\left.3\,i\,\mathrm{Sin}[2\,(c+d\,x)]\right)\,(i+\mathrm{Tan}[c+d\,x])\right)\Big/\left(5\,a\,d\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}\right)\right)$$

Problem 231: Result unnecessarily involves higher level functions.

$$\int \frac{1}{(e \operatorname{Sec}[c+d x])^{5/2} (a+\mathrm{i} a \operatorname{Tan}[c+d x])} \, dx$$

Optimal (type 4, 114 leaves, 4 steps):

$$\frac{14 \operatorname{EllipticE}\left[\frac{1}{2} (c+d x), 2\right]}{15 a d e^2 \sqrt{\operatorname{Cos}[c+d x]} \sqrt{e \operatorname{Sec}[c+d x]}}+\frac{14 \operatorname{Sin}[c+d x]}{45 a d e (e \operatorname{Sec}[c+d x])^{3/2}}+\frac{2 \mathrm{i}}{9 d (e \operatorname{Sec}[c+d x])^{5/2} (a+\mathrm{i} a \operatorname{Tan}[c+d x])}$$

Result (type 5, 123 leaves):

$$-\left(\left(\left(62+64 \operatorname{Cos}[2 (c+d x)]+2 \operatorname{Cos}[4 (c+d x)]-168 \sqrt{1+e^{2 \mathrm{i} (c+d x)}} \operatorname{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2 \mathrm{i} (c+d x)}\right]+98 \mathrm{i} \operatorname{Sin}[2 (c+d x)]+7 \mathrm{i} \operatorname{Sin}[4 (c+d x)]\right) (\mathrm{i}+\operatorname{Tan}[c+d x])\right) \Big/ \left(180 a d e^2 \sqrt{e \operatorname{Sec}[c+d x]}\right)\right)$$

Problem 233: Result unnecessarily involves higher level functions.

$$\int \frac{(e \operatorname{Sec}[c+d x])^{15/2}}{(a+\mathrm{i} a \operatorname{Tan}[c+d x])^2} \, dx$$

Optimal (type 4, 183 leaves, 6 steps):

$$-\frac{22 e^8 \operatorname{EllipticE}\left[\frac{1}{2} (c+d x), 2\right]}{15 a^2 d \sqrt{\operatorname{Cos}[c+d x]} \sqrt{e \operatorname{Sec}[c+d x]}}+\frac{22 e^7 \sqrt{e \operatorname{Sec}[c+d x]} \operatorname{Sin}[c+d x]}{15 a^2 d}+\frac{22 e^5 (e \operatorname{Sec}[c+d x])^{5/2} \operatorname{Sin}[c+d x]}{45 a^2 d}+\frac{22 e^3 (e \operatorname{Sec}[c+d x])^{9/2} \operatorname{Sin}[c+d x]}{63 a^2 d}-\frac{4 \mathrm{i} e^2 (e \operatorname{Sec}[c+d x])^{11/2}}{7 d (a^2+\mathrm{i} a^2 \operatorname{Tan}[c+d x])}$$

Result (type 5, 285 leaves):

$$\frac{1}{15\, d\, \mathrm{Sec}[c+d\, x]^{11/2}\, (a+i\, a\, \mathrm{Tan}[c+d\, x])^2}$$
$$(e\, \mathrm{Sec}[c+d\, x])^{15/2}\, (\mathrm{Cos}[d\, x]+i\, \mathrm{Sin}[d\, x])^2 \Bigg(-\frac{1}{-1+e^{2\, i\, c}} 22\, i\, \sqrt{2}\, e^{i\, (c-d\, x)} \sqrt{\frac{e^{i\, (c+d\, x)}}{1+e^{2\, i\, (c+d\, x)}}}$$
$$\left(1+e^{2\, i\, (c+d\, x)}+\left(-1+e^{2\, i\, c}\right)\sqrt{1+e^{2\, i\, (c+d\, x)}}\ \mathrm{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2\, i\, (c+d\, x)}\right]\right)+$$
$$\frac{1}{168} \mathrm{Csc}[c]\, \mathrm{Sec}[c+d\, x]^{9/2}\, (\mathrm{Cos}[2\, c]+i\, \mathrm{Sin}[2\, c])$$
$$(1260\, \mathrm{Cos}[d\, x]+1050\, \mathrm{Cos}[2\, c+d\, x]+1078\, \mathrm{Cos}[2\, c+3\, d\, x]+77\, \mathrm{Cos}[4\, c+3\, d\, x]+$$
$$231\, \mathrm{Cos}[4\, c+5\, d\, x]+720\, i\, \mathrm{Sin}[d\, x]-720\, i\, \mathrm{Sin}[2\, c+d\, x])\Bigg)$$

Problem 235: Result unnecessarily involves higher level functions.

$$\int \frac{(e\, \mathrm{Sec}[c+d\, x])^{11/2}}{(a+i\, a\, \mathrm{Tan}[c+d\, x])^2}\, dx$$

Optimal (type 4, 152 leaves, 5 steps):

$$-\frac{14\, e^6\, \mathrm{EllipticE}\left[\frac{1}{2}(c+d\, x), 2\right]}{5\, a^2\, d\, \sqrt{\mathrm{Cos}[c+d\, x]}\, \sqrt{e\, \mathrm{Sec}[c+d\, x]}}+\frac{14\, e^5\, \sqrt{e\, \mathrm{Sec}[c+d\, x]}\, \mathrm{Sin}[c+d\, x]}{5\, a^2\, d}+$$
$$\frac{14\, e^3\, (e\, \mathrm{Sec}[c+d\, x])^{5/2}\, \mathrm{Sin}[c+d\, x]}{15\, a^2\, d}-\frac{4\, i\, e^2\, (e\, \mathrm{Sec}[c+d\, x])^{7/2}}{3\, d\, \left(a^2+i\, a^2\, \mathrm{Tan}[c+d\, x]\right)}$$

Result (type 5, 263 leaves):

$$\Bigg((e\, \mathrm{Sec}[c+d\, x])^{11/2}\, (\mathrm{Cos}[d\, x]+i\, \mathrm{Sin}[d\, x])^2 \Bigg(-\frac{1}{-1+e^{2\, i\, c}} 14\, i\, \sqrt{2}\, e^{i\, (c-d\, x)} \sqrt{\frac{e^{i\, (c+d\, x)}}{1+e^{2\, i\, (c+d\, x)}}}$$
$$\left(1+e^{2\, i\, (c+d\, x)}+\left(-1+e^{2\, i\, c}\right)\sqrt{1+e^{2\, i\, (c+d\, x)}}\ \mathrm{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2\, i\, (c+d\, x)}\right]\right)+$$
$$\frac{1}{6} \mathrm{Csc}[c]\, \mathrm{Sec}[c+d\, x]^{5/2}\, (\mathrm{Cos}[2\, c]+i\, \mathrm{Sin}[2\, c])$$
$$(36\, \mathrm{Cos}[d\, x]+27\, \mathrm{Cos}[2\, c+d\, x]+21\, \mathrm{Cos}[2\, c+3\, d\, x]+20\, i\, \mathrm{Sin}[d\, x]-20\, i\, \mathrm{Sin}[2\, c+d\, x])\Bigg)\Bigg) \Big/$$
$$\left(5\, d\, \mathrm{Sec}[c+d\, x]^{7/2}\, (a+i\, a\, \mathrm{Tan}[c+d\, x])^2\right)$$

Problem 237: Result unnecessarily involves higher level functions.

$$\int \frac{(e\, \mathrm{Sec}[c+d\, x])^{7/2}}{(a+i\, a\, \mathrm{Tan}[c+d\, x])^2}\, dx$$

Optimal (type 4, 115 leaves, 4 steps):

$$\frac{6 e^4 \text{EllipticE}\left[\frac{1}{2}(c+d x),2\right]}{a^2 d \sqrt{\text{Cos}[c+d x]} \sqrt{e \text{Sec}[c+d x]}}-\frac{6 e^3 \sqrt{e \text{Sec}[c+d x]} \text{Sin}[c+d x]}{a^2 d}+\frac{4 i e^2 (e \text{Sec}[c+d x])^{3/2}}{d \left(a^2+i a^2 \text{Tan}[c+d x]\right)}$$

Result (type 5, 80 leaves):

$$\frac{1}{a^2 d} 2 i e^3 e^{-i (c+d x)} \left(-1+3 \sqrt{1+e^{2 i (c+d x)}} \text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2 i (c+d x)}\right]\right) \sqrt{e \text{Sec}[c+d x]}$$

Problem 239: Result unnecessarily involves higher level functions.

$$\int \frac{(e \text{Sec}[c+d x])^{3/2}}{(a+i a \text{Tan}[c+d x])^2} \, dx$$

Optimal (type 4, 90 leaves, 3 steps):

$$\frac{2 e^2 \text{EllipticE}\left[\frac{1}{2}(c+d x),2\right]}{5 a^2 d \sqrt{\text{Cos}[c+d x]} \sqrt{e \text{Sec}[c+d x]}}+\frac{4 i e^2}{5 d \sqrt{e \text{Sec}[c+d x]} \left(a^2+i a^2 \text{Tan}[c+d x]\right)}$$

Result (type 5, 102 leaves):

$$\frac{1}{5 a^2 d} i e e^{-3 i (c+d x)} \left(1+e^{2 i (c+d x)}+2 e^{2 i (c+d x)} \sqrt{1+e^{2 i (c+d x)}} \text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2 i (c+d x)}\right]\right) \sqrt{e \text{Sec}[c+d x]}$$

Problem 241: Result unnecessarily involves higher level functions.

$$\int \frac{1}{\sqrt{e \text{Sec}[c+d x]} (a+i a \text{Tan}[c+d x])^2} \, dx$$

Optimal (type 4, 116 leaves, 4 steps):

$$\frac{2 \text{EllipticE}\left[\frac{1}{2}(c+d x),2\right]}{3 a^2 d \sqrt{\text{Cos}[c+d x]} \sqrt{e \text{Sec}[c+d x]}}+\frac{2 e \text{Sin}[c+d x]}{9 a^2 d (e \text{Sec}[c+d x])^{3/2}}+\frac{4 i e^2}{9 d (e \text{Sec}[c+d x])^{5/2} \left(a^2+i a^2 \text{Tan}[c+d x]\right)}$$

Result (type 5, 124 leaves):

$$\left(\left(\text{Cos}[2(c+d x)]-i \,\text{Sin}[2(c+d x)]\right)\left(4 i-8 i \,\text{Cos}[2(c+d x)]+\frac{24 i\, e^{2 i (c+d x)} \,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2 i (c+d x)}\right]}{\sqrt{1+e^{2 i (c+d x)}}}+10 \,\text{Sin}[2(c+d x)]\right)\right)\Big/\left(18 a^2 d \sqrt{e \,\text{Sec}[c+d x]}\right)$$

Problem 243: Result unnecessarily involves higher level functions.

$$\int \frac{1}{(e \,\text{Sec}[c+d x])^{5/2} (a+i a \,\text{Tan}[c+d x])^2} \, dx$$

Optimal (type 4, 150 leaves, 5 steps):

$$\frac{42 \,\text{EllipticE}\left[\frac{1}{2}(c+d x),2\right]}{65 a^2 d e^2 \sqrt{\text{Cos}[c+d x]} \sqrt{e \,\text{Sec}[c+d x]}}+\frac{2 e \,\text{Sin}[c+d x]}{13 a^2 d (e \,\text{Sec}[c+d x])^{7/2}}+\frac{14 \,\text{Sin}[c+d x]}{65 a^2 d e (e \,\text{Sec}[c+d x])^{3/2}}+\frac{4 i e^2}{13 d (e \,\text{Sec}[c+d x])^{9/2} \left(a^2+i a^2 \,\text{Tan}[c+d x]\right)}$$

Result (type 5, 149 leaves):

$$\left(\left(\text{Cos}[2(c+d x)]-i \,\text{Sin}[2(c+d x)]\right)\left(88 i-256 i \,\text{Cos}[2(c+d x)]-8 i \,\text{Cos}[4(c+d x)]+\frac{672 i\, e^{2 i (c+d x)} \,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2 i (c+d x)}\right]}{\sqrt{1+e^{2 i (c+d x)}}}+316 \,\text{Sin}[2(c+d x)]+18 \,\text{Sin}[4(c+d x)]\right)\right)\Big/\left(520 a^2 d e^2 \sqrt{e \,\text{Sec}[c+d x]}\right)$$

Problem 245: Result unnecessarily involves higher level functions.

$$\int \frac{(e \,\text{Sec}[c+d x])^{15/2}}{(a+i a \,\text{Tan}[c+d x])^3} \, dx$$

Optimal (type 4, 178 leaves, 6 steps):

$$-\frac{22 e^8 \,\text{EllipticE}\left[\frac{1}{2}(c+d x),2\right]}{5 a^3 d \sqrt{\text{Cos}[c+d x]} \sqrt{e \,\text{Sec}[c+d x]}}-\frac{22 i e^4 (e \,\text{Sec}[c+d x])^{7/2}}{21 a^3 d}+\frac{22 e^7 \sqrt{e \,\text{Sec}[c+d x]} \,\text{Sin}[c+d x]}{5 a^3 d}+\frac{22 e^5 (e \,\text{Sec}[c+d x])^{5/2} \,\text{Sin}[c+d x]}{15 a^3 d}-\frac{4 i e^2 (e \,\text{Sec}[c+d x])^{11/2}}{3 a d (a+i a \,\text{Tan}[c+d x])^2}$$

Result (type 5, 128 leaves):

$$-\frac{1}{210\,a^3\,d}e^6\,(e\,\mathrm{Sec}[c+d\,x])^{3/2}\,\Big(-116-308\,\mathrm{Cos}[2\,(c+d\,x)]+231\,e^{-2\,i\,(c+d\,x)}\,\left(1+e^{2\,i\,(c+d\,x)}\right)^{5/2}\,\mathrm{Hypergeometric2F1}\Big[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\Big]+77\,i\,\mathrm{Sec}[c+d\,x]\,\mathrm{Sin}[3\,(c+d\,x)]+17\,i\,\mathrm{Tan}[c+d\,x]\Big)\,(i+\mathrm{Tan}[c+d\,x])$$

Problem 247: Result unnecessarily involves higher level functions.

$$\int\frac{(e\,\mathrm{Sec}[c+d\,x])^{11/2}}{(a+i\,a\,\mathrm{Tan}[c+d\,x])^3}\,dx$$

Optimal (type 4, 141 leaves, 5 steps):

$$\frac{14\,e^6\,\mathrm{EllipticE}\left[\frac{1}{2}\,(c+d\,x),2\right]}{a^3\,d\,\sqrt{\mathrm{Cos}[c+d\,x]}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\frac{14\,i\,e^4\,(e\,\mathrm{Sec}[c+d\,x])^{3/2}}{3\,a^3\,d}-\frac{14\,e^5\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}\,\mathrm{Sin}[c+d\,x]}{a^3\,d}+\frac{4\,i\,e^2\,(e\,\mathrm{Sec}[c+d\,x])^{7/2}}{a\,d\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^2}$$

Result (type 5, 101 leaves):

$$\frac{1}{3\,a^3\,d}2\,e^5\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}\,(\mathrm{Cos}[c]-i\,\mathrm{Sin}[c])\,(i\,\mathrm{Cos}[d\,x]+\mathrm{Sin}[d\,x])\,\left(-8+21\,\sqrt{1+e^{2\,i\,(c+d\,x)}}\,\mathrm{Hypergeometric2F1}\Big[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\Big]+i\,\mathrm{Tan}[c+d\,x]\right)$$

Problem 249: Result unnecessarily involves higher level functions.

$$\int\frac{(e\,\mathrm{Sec}[c+d\,x])^{7/2}}{(a+i\,a\,\mathrm{Tan}[c+d\,x])^3}\,dx$$

Optimal (type 4, 116 leaves, 4 steps):

$$-\frac{6\,i\,e^4}{5\,a^3\,d\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}-\frac{6\,e^4\,\mathrm{EllipticE}\left[\frac{1}{2}\,(c+d\,x),2\right]}{5\,a^3\,d\,\sqrt{\mathrm{Cos}[c+d\,x]}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\frac{4\,i\,e^2\,(e\,\mathrm{Sec}[c+d\,x])^{3/2}}{5\,a\,d\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^2}$$

Result (type 5, 117 leaves):

$$\left(2\,e\,e^{-i\,d\,x}\,\left(-2+\frac{6\,e^{2\,i\,(c+d\,x)}\,\mathrm{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]}{\sqrt{1+e^{2\,i\,(c+d\,x)}}}\right)\,(e\,\mathrm{Sec}[c+d\,x])^{5/2}\,(\mathrm{Cos}[c+2\,d\,x]+i\,\mathrm{Sin}[c+2\,d\,x])\right)\Big/\left(5\,a^3\,d\,(-i+\mathrm{Tan}[c+d\,x])^3\right)$$

Problem 251: Result unnecessarily involves higher level functions.

$$\int \frac{(e \operatorname{Sec}[c+d x])^{3/2}}{(a+i a \operatorname{Tan}[c+d x])^3} \, dx$$

Optimal (type 4, 132 leaves, 4 steps):

$$\frac{2 e^2 \operatorname{EllipticE}\left[\frac{1}{2}(c+d x), 2\right]}{15 a^3 d \sqrt{\operatorname{Cos}[c+d x]} \sqrt{e \operatorname{Sec}[c+d x]}}+\frac{4 i e^2}{9 a d \sqrt{e \operatorname{Sec}[c+d x]}(a+i a \operatorname{Tan}[c+d x])^2}+\frac{2 i e^2}{45 d \sqrt{e \operatorname{Sec}[c+d x]}\left(a^3+i a^3 \operatorname{Tan}[c+d x]\right)}$$

Result (type 5, 140 leaves):

$$-\left(\left(e^{-i d x} \operatorname{Sec}[c+d x]^2 (e \operatorname{Sec}[c+d x])^{3/2} (\operatorname{Cos}[d x]+i \operatorname{Sin}[d x])\right.\right.$$
$$\left(8+8 \operatorname{Cos}[2(c+d x)]+6 e^{2 i (c+d x)} \sqrt{1+e^{2 i (c+d x)}} \operatorname{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2},\right.\right.$$
$$\left.\left.\left.\left.\frac{3}{4},-e^{2 i (c+d x)}\right]+3 i \operatorname{Sin}[2(c+d x)]\right)\right) \Big/ \left(45 a^3 d(-i+\operatorname{Tan}[c+d x])^3\right)\right)$$

Problem 253: Result unnecessarily involves higher level functions.

$$\int \frac{1}{\sqrt{e \operatorname{Sec}[c+d x]}(a+i a \operatorname{Tan}[c+d x])^3} \, dx$$

Optimal (type 4, 152 leaves, 5 steps):

$$\frac{14 \operatorname{EllipticE}\left[\frac{1}{2}(c+d x), 2\right]}{39 a^3 d \sqrt{\operatorname{Cos}[c+d x]} \sqrt{e \operatorname{Sec}[c+d x]}}+\frac{14 e \operatorname{Sin}[c+d x]}{117 a^3 d(e \operatorname{Sec}[c+d x])^{3/2}}+\frac{2 i}{13 d \sqrt{e \operatorname{Sec}[c+d x]}(a+i a \operatorname{Tan}[c+d x])^3}+\frac{28 i e^2}{117 d(e \operatorname{Sec}[c+d x])^{5/2}\left(a^3+i a^3 \operatorname{Tan}[c+d x]\right)}$$

Result (type 5, 145 leaves):

$$\frac{1}{468 a^3 d e} \sqrt{e \operatorname{Sec}[c+d x]}(i \operatorname{Cos}[3(c+d x)]+\operatorname{Sin}[3(c+d x)])$$
$$\left(62+8 \operatorname{Cos}[2(c+d x)]-54 \operatorname{Cos}[4(c+d x)]+168 e^{2 i (c+d x)} \sqrt{1+e^{2 i (c+d x)}}\right.$$
$$\left.\operatorname{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4},-e^{2 i (c+d x)}\right]-42 i \operatorname{Sin}[2(c+d x)]-63 i \operatorname{Sin}[4(c+d x)]\right)$$

Problem 255: Result unnecessarily involves higher level functions.

$$\int \frac{(e \operatorname{Sec}[c+d x])^{15/2}}{(a+i a \operatorname{Tan}[c+d x])^4} \, dx$$

Optimal (type 4, 192 leaves, 6 steps):

$$\frac{154\, e^8\, \text{EllipticE}\left[\frac{1}{2}(c+d x), 2\right]}{5\, a^4\, d\, \sqrt{\text{Cos}[c+d x]}\, \sqrt{e\, \text{Sec}[c+d x]}}-\frac{154\, e^7\, \sqrt{e\, \text{Sec}[c+d x]}\, \text{Sin}[c+d x]}{5\, a^4\, d}-\frac{154\, e^5\, (e\, \text{Sec}[c+d x])^{5/2}\, \text{Sin}[c+d x]}{15\, a^4\, d}+\frac{4\, i\, e^2\, (e\, \text{Sec}[c+d x])^{11/2}}{a\, d\, (a+i\, a\, \text{Tan}[c+d x])^3}+\frac{44\, i\, e^4\, (e\, \text{Sec}[c+d x])^{7/2}}{3\, d\, \left(a^4+i\, a^4\, \text{Tan}[c+d x]\right)}$$

Result (type 5, 135 leaves):

$$\left(32\, i\, e^7\, e^{7 i (c+d x)} \left(-111-176\, e^{2 i (c+d x)}-77\, e^{4 i (c+d x)}+231\left(1+e^{2 i (c+d x)}\right)^{5/2} \text{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2 i (c+d x)}\right]\right) \sqrt{e\, \text{Sec}[c+d x]}\right) \Big/ \left(15\, a^4\, d \left(1+e^{2 i (c+d x)}\right)^6 (-i+\text{Tan}[c+d x])^4\right)$$

Problem 257: Result unnecessarily involves higher level functions.

$$\int \frac{(e\, \text{Sec}[c+d x])^{11/2}}{(a+i\, a\, \text{Tan}[c+d x])^4}\, dx$$

Optimal (type 4, 163 leaves, 5 steps):

$$-\frac{42\, e^6\, \text{EllipticE}\left[\frac{1}{2}(c+d x), 2\right]}{5\, a^4\, d\, \sqrt{\text{Cos}[c+d x]}\, \sqrt{e\, \text{Sec}[c+d x]}}+\frac{42\, e^5\, \sqrt{e\, \text{Sec}[c+d x]}\, \text{Sin}[c+d x]}{5\, a^4\, d}+\frac{4\, i\, e^2\, (e\, \text{Sec}[c+d x])^{7/2}}{5\, a\, d\, (a+i\, a\, \text{Tan}[c+d x])^3}-\frac{28\, i\, e^4\, (e\, \text{Sec}[c+d x])^{3/2}}{5\, d\, \left(a^4+i\, a^4\, \text{Tan}[c+d x]\right)}$$

Result (type 5, 106 leaves):

$$-\frac{1}{5\, a^4\, d} 2\, i\, e^5\, e^{-3 i (c+d x)} \left(-2-7\, e^{2 i (c+d x)}+21\, e^{2 i (c+d x)} \sqrt{1+e^{2 i (c+d x)}}\, \text{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2 i (c+d x)}\right]\right) \sqrt{e\, \text{Sec}[c+d x]}$$

Problem 259: Result unnecessarily involves higher level functions.

$$\int \frac{(e\, \text{Sec}[c+d x])^{7/2}}{(a+i\, a\, \text{Tan}[c+d x])^4}\, dx$$

Optimal (type 4, 132 leaves, 4 steps):

$$-\frac{2\, e^4\, \text{EllipticE}\left[\frac{1}{2}(c+d x), 2\right]}{15\, a^4\, d\, \sqrt{\text{Cos}[c+d x]}\, \sqrt{e\, \text{Sec}[c+d x]}}+\frac{4\, i\, e^2\, (e\, \text{Sec}[c+d x])^{3/2}}{9\, a\, d\, (a+i\, a\, \text{Tan}[c+d x])^3}-\frac{4\, i\, e^4}{15\, d\, \sqrt{e\, \text{Sec}[c+d x]}\, \left(a^4+i\, a^4\, \text{Tan}[c+d x]\right)}$$

Result (type 5, 149 leaves):

$$\left(e^3 e^{-i d x} \operatorname{Sec}[c+d x]^4 \sqrt{e \operatorname{Sec}[c+d x]} \left(-7-7 \operatorname{Cos}[2 (c+d x)]+6 e^{2 i (c+d x)} \sqrt{1+e^{2 i (c+d x)}} \operatorname{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2 i (c+d x)}\right]+3 i \operatorname{Sin}[2 (c+d x)]\right) (-i \operatorname{Cos}[c+2 d x]+\operatorname{Sin}[c+2 d x])\right) \Big/ \left(45 a^4 d (-i+\operatorname{Tan}[c+d x])^4\right)$$

Problem 261: Result unnecessarily involves higher level functions.

$$\int \frac{(e \operatorname{Sec}[c+d x])^{3/2}}{(a+i a \operatorname{Tan}[c+d x])^4} \, dx$$

Optimal (type 4, 163 leaves, 5 steps):

$$\frac{2 e^2 \operatorname{EllipticE}\left[\frac{1}{2} (c+d x), 2\right]}{39 a^4 d \sqrt{\operatorname{Cos}[c+d x]} \sqrt{e \operatorname{Sec}[c+d x]}}+\frac{2 e^3 \operatorname{Sin}[c+d x]}{117 a^4 d (e \operatorname{Sec}[c+d x])^{3/2}}+\frac{4 i e^2}{13 a d \sqrt{e \operatorname{Sec}[c+d x]} (a+i a \operatorname{Tan}[c+d x])^3}+\frac{4 i e^4}{117 d (e \operatorname{Sec}[c+d x])^{5/2} \left(a^4+i a^4 \operatorname{Tan}[c+d x]\right)}$$

Result (type 5, 142 leaves):

$$\left(i e^{-i d x} \operatorname{Sec}[c+d x]^2 (e \operatorname{Sec}[c+d x])^{3/2} (\operatorname{Cos}[d x]+i \operatorname{Sin}[d x]) \left(28+40 \operatorname{Cos}[2 (c+d x)]+\frac{24 e^{4 i (c+d x)} \operatorname{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2 i (c+d x)}\right]}{\sqrt{1+e^{2 i (c+d x)}}}+22 i \operatorname{Sin}[2 (c+d x)]\right)\right) \Big/ \left(234 a^4 d (-i+\operatorname{Tan}[c+d x])^4\right)$$

Problem 267: Result more than twice size of optimal antiderivative.

$$\int (d \operatorname{Sec}[e+f x])^{5/3} (a+i a \operatorname{Tan}[e+f x])^2 \, dx$$

Optimal (type 5, 71 leaves, 4 steps):

$$\left(12 i 2^{5/6} a^2 \operatorname{Hypergeometric2F1}\left[-\frac{11}{6}, \frac{5}{6}, \frac{11}{6}, \frac{1}{2} (1-i \operatorname{Tan}[e+f x])\right] (d \operatorname{Sec}[e+f x])^{5/3}\right) \Big/ \left(5 f (1+i \operatorname{Tan}[e+f x])^{5/6}\right)$$

Result (type 5, 264 leaves):

$$\frac{1}{16\, f\, \text{Sec}[e+f x]^{11/3}\, (\text{Cos}[f x]+i\, \text{Sin}[f x])^2} (d\, \text{Sec}[e+f x])^{5/3} \left(-\frac{1}{-1+e^{2 i e}} 33\, i\, 2^{2/3}\, e^{-i (3 e+f x)} \left(\frac{e^{i (e+f x)}}{1+e^{2 i (e+f x)}}\right)^{2/3} \left(1+e^{2 i (e+f x)}+\left(-1+e^{2 i e}\right) \left(1+e^{2 i (e+f x)}\right)^{2/3} \text{Hypergeometric2F1}\left[-\frac{1}{6},\frac{2}{3},\frac{5}{6},-e^{2 i (e+f x)}\right]\right)+\frac{3}{20} \text{Csc}[e]\, \text{Sec}[e+f x]^{8/3} (\text{Cos}[2 e]-i\, \text{Sin}[2 e]) (90\, \text{Cos}[f x]+75\, \text{Cos}[2 e+f x]+55\, \text{Cos}[2 e+3 f x]-64\, i\, \text{Sin}[f x]+64\, i\, \text{Sin}[2 e+f x])\right) (a+i\, a\, \text{Tan}[e+f x])^2$$

Problem 278: Result more than twice size of optimal antiderivative.

$$\int \frac{1}{(d\, \text{Sec}[e+f x])^{5/3} (a+i\, a\, \text{Tan}[e+f x])^2} \, dx$$

Optimal (type 5, 71 leaves, 4 steps):

$$-\left(\left(3\, i\, \text{Hypergeometric2F1}\left[-\frac{5}{6},\frac{23}{6},\frac{1}{6},\frac{1}{2} (1-i\, \text{Tan}[e+f x])\right] (1+i\, \text{Tan}[e+f x])^{5/6}\right) \Big/ \left(20\times 2^{5/6}\, a^2\, f\, (d\, \text{Sec}[e+f x])^{5/3}\right)\right)$$

Result (type 5, 143 leaves):

$$\left(3\, i\, \text{Sec}[e+f x]^4 \left(-46-40\, \text{Cos}[2 (e+f x)]+6\, \text{Cos}[4 (e+f x)]+128\, e^{2 i (e+f x)} \left(1+e^{2 i (e+f x)}\right)^{1/3} \text{Hypergeometric2F1}\left[\frac{1}{6},\frac{1}{3},\frac{7}{6},-e^{2 i (e+f x)}\right]-10\, i\, \text{Sin}[2 (e+f x)]+11\, i\, \text{Sin}[4 (e+f x)]\right)\right) \Big/ \left(680\, a^2\, f\, (d\, \text{Sec}[e+f x])^{5/3} (-i+\text{Tan}[e+f x])^2\right)$$

Problem 296: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d x]^2 (a+i\, a\, \text{Tan}[c+d x])^{3/2} \, dx$$

Optimal (type 3, 29 leaves, 2 steps):

$$-\frac{2\, i\, (a+i\, a\, \text{Tan}[c+d x])^{5/2}}{5\, a\, d}$$

Result (type 3, 69 leaves):

$$\frac{1}{5 d} 2\, a\, \text{Sec}[c+d x]^2 (\text{Cos}[d x]-i\, \text{Sin}[d x]) (-i\, \text{Cos}[2 c+3 d x]+\text{Sin}[2 c+3 d x]) \sqrt{a+i\, a\, \text{Tan}[c+d x]}$$

Problem 309: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]^2\,(a+\text{i}\,a\,\text{Tan}[c+d\,x])^{5/2}\,dx$$

Optimal (type 3, 29 leaves, 2 steps):

$$-\frac{2\,\text{i}\,(a+\text{i}\,a\,\text{Tan}[c+d\,x])^{7/2}}{7\,a\,d}$$

Result (type 3, 73 leaves):

$$\left(2\,a^2\,\text{Sec}[c+d\,x]^3\,(-\text{i}\,\text{Cos}[3\,c+5\,d\,x]+\text{Sin}[3\,c+5\,d\,x])\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}\right)\Big/\left(7\,d\,(\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x])^2\right)$$

Problem 322: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]^2\,(a+\text{i}\,a\,\text{Tan}[c+d\,x])^{7/2}\,dx$$

Optimal (type 3, 29 leaves, 2 steps):

$$-\frac{2\,\text{i}\,(a+\text{i}\,a\,\text{Tan}[c+d\,x])^{9/2}}{9\,a\,d}$$

Result (type 3, 73 leaves):

$$\left(2\,a^3\,\text{Sec}[c+d\,x]^4\,(-\text{i}\,\text{Cos}[4\,c+7\,d\,x]+\text{Sin}[4\,c+7\,d\,x])\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}\right)\Big/\left(9\,d\,(\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x])^3\right)$$

Problem 329: Result more than twice size of optimal antiderivative.

$$\int \text{Cos}[c+d\,x]^5\,(a+\text{i}\,a\,\text{Tan}[c+d\,x])^{7/2}\,dx$$

Optimal (type 3, 35 leaves, 1 step):

$$-\frac{2\,\text{i}\,a\,\text{Cos}[c+d\,x]^5\,(a+\text{i}\,a\,\text{Tan}[c+d\,x])^{5/2}}{5\,d}$$

Result (type 3, 73 leaves):

$$\left(2\,a^3\,\text{Cos}[c+d\,x]^3\,(-\text{i}\,\text{Cos}[2\,c+5\,d\,x]+\text{Sin}[2\,c+5\,d\,x])\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}\right)\Big/\left(5\,d\,(\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x])^3\right)$$

Problem 394: Result more than twice size of optimal antiderivative.

$$\int (e\,\text{Sec}[c+d\,x])^{3/2}\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}\,dx$$

Optimal (type 3, 524 leaves, 12 steps):

$$\frac{i\, a\, (e\, \text{Sec}[c+d\,x])^{3/2}}{d\, \sqrt{a+i\, a\, \text{Tan}[c+d\,x]}} - \frac{i\, a^{3/2}\, e^{3/2}\, \text{ArcTan}\left[1-\frac{\sqrt{2}\, \sqrt{e}\, \sqrt{a-i\, a\, \text{Tan}[c+d\,x]}}{\sqrt{a}\, \sqrt{e\, \text{Sec}[c+d\,x]}}\right]\, \text{Sec}[c+d\,x]}{\sqrt{2}\, d\, \sqrt{a-i\, a\, \text{Tan}[c+d\,x]}\, \sqrt{a+i\, a\, \text{Tan}[c+d\,x]}} +$$

$$\frac{i\, a^{3/2}\, e^{3/2}\, \text{ArcTan}\left[1+\frac{\sqrt{2}\, \sqrt{e}\, \sqrt{a-i\, a\, \text{Tan}[c+d\,x]}}{\sqrt{a}\, \sqrt{e\, \text{Sec}[c+d\,x]}}\right]\, \text{Sec}[c+d\,x]}{\sqrt{2}\, d\, \sqrt{a-i\, a\, \text{Tan}[c+d\,x]}\, \sqrt{a+i\, a\, \text{Tan}[c+d\,x]}} +$$

$$\left(i\, a^{3/2}\, e^{3/2}\, \text{Log}\left[a-\frac{\sqrt{2}\, \sqrt{a}\, \sqrt{e}\, \sqrt{a-i\, a\, \text{Tan}[c+d\,x]}}{\sqrt{e\, \text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\, (a-i\, a\, \text{Tan}[c+d\,x])\right]\right.$$
$$\left.\text{Sec}[c+d\,x]\right) \Big/ \left(2\, \sqrt{2}\, d\, \sqrt{a-i\, a\, \text{Tan}[c+d\,x]}\, \sqrt{a+i\, a\, \text{Tan}[c+d\,x]}\right) -$$

$$\left(i\, a^{3/2}\, e^{3/2}\, \text{Log}\left[a+\frac{\sqrt{2}\, \sqrt{a}\, \sqrt{e}\, \sqrt{a-i\, a\, \text{Tan}[c+d\,x]}}{\sqrt{e\, \text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\, (a-i\, a\, \text{Tan}[c+d\,x])\right]\right.$$
$$\left.\text{Sec}[c+d\,x]\right) \Big/ \left(2\, \sqrt{2}\, d\, \sqrt{a-i\, a\, \text{Tan}[c+d\,x]}\, \sqrt{a+i\, a\, \text{Tan}[c+d\,x]}\right)$$

Result (type 3, 1530 leaves):

$$\left(\text{Cos}[c+d\,x]\, (e\, \text{Sec}[c+d\,x])^{3/2}\right.$$
$$\left(i\, \text{Cos}[c+d\,x]\, \sqrt{\text{Cos}[d\,x]+i\, \text{Sin}[d\,x]}+\sqrt{\text{Cos}[d\,x]+i\, \text{Sin}[d\,x]}\, \text{Sin}[c+d\,x]\right)$$
$$\left.\sqrt{a+i\, a\, \text{Tan}[c+d\,x]}\right) \Big/ \left(d\, \sqrt{\text{Cos}[d\,x]+i\, \text{Sin}[d\,x]}\right) +$$

$$\left((1+i) \left(\text{ArcTan}\left[\frac{(-1)^{1/4}\, \left(\text{Cos}\left[\frac{c}{2}\right]-i\, \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right] +\right.\right.$$

$$\left.i\, \text{ArcTan}\left[\frac{\sqrt{-1+i}\, \left(\text{Cos}\left[\frac{c}{2}\right]-i\, \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\, \sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right) \text{Cos}[c+d\,x]^2\, (e\, \text{Sec}[c+d\,x])^{3/2}$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]+i\, \text{Sin}\left[\frac{c}{2}\right]\right) (i\, \text{Cos}[c]+\text{Sin}[c])\, \sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\, \sqrt{a+i\, a\, \text{Tan}[c+d\,x]}$$

$$\left.\left(\frac{1}{2}\sqrt{\text{Cos}[d\,x]+i\, \text{Sin}[d\,x]}-\frac{1}{2}\, i\, \sqrt{\text{Cos}[d\,x]+i\, \text{Sin}[d\,x]}\, \text{Tan}[c+d\,x]\right)\right) \Big/$$

$$\left(d\sqrt{2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg(\Bigg(\left(\frac{1}{4}+\frac{\mathrm{i}}{4}\right)\Bigg(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]+$$

$$\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\Bigg)\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2$$

$$\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{i}\,\mathrm{Cos}[c]+\mathrm{Sin}[c]\right)\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}\Bigg)\Big/$$

$$\left(\sqrt{2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\Bigg(\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\Bigg(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]+$$

$$\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\Bigg)\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2$$

$$\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{i}\,\mathrm{Cos}[c]+\mathrm{Sin}[c]\right)\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Big/$$

$$\left(2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}+\Bigg(\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\Bigg(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]+$$

$$\mathrm{i}\,\mathrm{ArcTan}\Big[\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\Big]\Bigg)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left(\mathrm{i}\,\mathrm{Cos}[c]+\mathrm{Sin}[c]\right)\left(\mathrm{i}\,\mathrm{Cos}[d\,x]-\mathrm{Sin}[d\,x]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Big/$$

$$\left(\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}\,\sqrt{2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\Bigg((1+\mathrm{i})\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{i}\,\mathrm{Cos}[c]+\mathrm{Sin}[c]\right)\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}$$

$$\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\Bigg(\Bigg(\mathrm{i}\,\Bigg(\frac{\sqrt{-1+\mathrm{i}}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+$$

$$\left(\sqrt{-1+\mathrm{i}}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\Bigg(4\sqrt{-1-\mathrm{i}}$$

$$\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\Bigg)\Bigg)\Bigg)\Big/\left(1-\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\Bigg(\frac{(-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+\Bigg((-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2$$

$$\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Big/\left(4\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\Bigg)\Big/$$

$$\left.\left.\left(1+\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\sqrt{2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg)\Bigg)$$

Problem 395: Result more than twice size of optimal antiderivative.

$$\int\sqrt{e\,\text{Sec}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\,dx$$

Optimal (type 3, 323 leaves, 10 steps):

$$\frac{i\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{d}-\frac{i\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{d}-\frac{1}{\sqrt{2}\,d}i\sqrt{a}\,\sqrt{e}\,\text{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,(a+i\,a\,\text{Tan}[c+d\,x])\right]+\frac{1}{\sqrt{2}\,d}i\sqrt{a}\,\sqrt{e}\,\text{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,(a+i\,a\,\text{Tan}[c+d\,x])\right]$$

Result (type 3, 1344 leaves):

$$\Bigg((1+i)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-i\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\sqrt{e\,\text{Sec}[c+d\,x]}$$

$$\left.\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{2\,\text{Cos}[d\,x]+2\,i\,\text{Sin}[d\,x]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)\Big/$$

$$\left(d\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right.\left(\left(\left(\frac{1}{4}+\frac{\mathrm{i}}{4}\right)\left(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.\right.$$

$$\left.\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2$$

$$\left.\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{2\,\mathrm{Cos}[d\,x]+2\,\mathrm{i}\,\mathrm{Sin}[d\,x]}\right)\Big/\left(\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\left(\frac{1}{4}+\frac{\mathrm{i}}{4}\right)\left(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2$$

$$\left.\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{2\,\mathrm{Cos}[d\,x]+2\,\mathrm{i}\,\mathrm{Sin}[d\,x]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}+$$

$$\left(\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\left(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\left(2\,i\,\text{Cos}[d\,x]-2\,\text{Sin}[d\,x]\right)\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg/$$

$$\left(\sqrt{2\,\text{Cos}[d\,x]+2\,i\,\text{Sin}[d\,x]}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\frac{1}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}$$

$$(1+i)\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\sqrt{2\,\text{Cos}[d\,x]+2\,i\,\text{Sin}[d\,x]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}$$

$$\left(-\left(\left(i\left(\frac{\sqrt{-1+i}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\,\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\left(\sqrt{-1+i}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\right.\right.\right.\right.\right.$$

$$\left.\left.\left.\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg/\left(4\,\sqrt{-1-i}\,\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Bigg/$$

$$\left.\left(1-\frac{i\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\,\left(i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)+$$

$$\left(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\right.$$

$$\left.\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{4\,\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}}\right)\Bigg/$$

$$\left.\left.\left.\left(1+\frac{i\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\,\left(i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\right)$$

Problem 400: Result more than twice size of optimal antiderivative.

$$\int (e\,\mathrm{Sec}[c+d\,x])^{5/2}\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^{3/2}\,dx$$

Optimal (type 3, 453 leaves, 13 steps):

$$\frac{7\,i\,a^{3/2}\,e^{5/2}\,\mathrm{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]}{8\,\sqrt{2}\,d}-\frac{7\,i\,a^{3/2}\,e^{5/2}\,\mathrm{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]}{8\,\sqrt{2}\,d}-\frac{1}{16\,\sqrt{2}\,d}7\,i\,a^{3/2}\,e^{5/2}\,\mathrm{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\,(a+i\,a\,\mathrm{Tan}[c+d\,x])\right]+\frac{1}{16\,\sqrt{2}\,d}7\,i\,a^{3/2}\,e^{5/2}\,\mathrm{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\,(a+i\,a\,\mathrm{Tan}[c+d\,x])\right]+\frac{7\,i\,a^2\,(e\,\mathrm{Sec}[c+d\,x])^{5/2}}{12\,d\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}-\frac{7\,i\,a\,e^2\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}{8\,d}+\frac{i\,a\,(e\,\mathrm{Sec}[c+d\,x])^{5/2}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}{3\,d}$$

Result (type 3, 1537 leaves):

$$\left(\mathrm{Cos}[c+d\,x]^4\,(e\,\mathrm{Sec}[c+d\,x])^{5/2}\left(\mathrm{Sec}[c+d\,x]\left(-\frac{7}{8}\,i\,\mathrm{Cos}[c]-\frac{7\,\mathrm{Sin}[c]}{8}\right)+\mathrm{Sec}[c+d\,x]^3\left(\frac{1}{3}\,i\,\mathrm{Cos}[c]+\frac{\mathrm{Sin}[c]}{3}\right)+\mathrm{Sec}[c+d\,x]^2\left(\frac{7}{12}\,i\,\mathrm{Cos}[2\,c+d\,x]+\frac{7}{12}\,\mathrm{Sin}[2\,c+d\,x]\right)\right)(a+i\,a\,\mathrm{Tan}[c+d\,x])^{3/2}\right)\Big/\left(d\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])\right)+$$

$$\left(\left(\frac{7}{8}+\frac{7\,i}{8}\right)\left(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]-i\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\right.$$

$$\mathrm{Cos}[c+d\,x]^3\,(e\,\mathrm{Sec}[c+d\,x])^{5/2}\left(\mathrm{Cos}\left[\frac{3\,c}{2}\right]-i\,\mathrm{Sin}\left[\frac{3\,c}{2}\right]\right)$$

$$\left(\frac{7}{16}\,\mathrm{Cos}[c]\,\sqrt{\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]}-\frac{7}{16}\,i\,\mathrm{Sin}[c]\,\sqrt{\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]}\right)$$

$$\left.\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^{3/2}\right)\Big/$$

$$\left(d\,\left(\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]\right)\,\sqrt{2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left(\left(\left(\frac{7}{32}+\frac{7\,\mathrm{i}}{32}\right)\left(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.\right.$$

$$\left.\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{3\,c}{2}\right]-\right.$$

$$\left.\left.\mathrm{i}\,\mathrm{Sin}\left[\frac{3\,c}{2}\right]\right)\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}\right)\Big/\left(\sqrt{2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\left(\frac{7}{16}+\frac{7\,\mathrm{i}}{16}\right)\left(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\mathrm{i}\,\mathrm{ArcTan}\left[\right.\right.\right.$$

$$\left.\left.\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{3\,c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{3\,c}{2}\right]\right)$$

$$\left.\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}+$$

$$\left(\left(\frac{7}{16}+\frac{7\,i}{16}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.i\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)$$

$$\left.\left(\text{Cos}\left[\frac{3\,c}{2}\right]-i\,\text{Sin}\left[\frac{3\,c}{2}\right]\right)\left(i\,\text{Cos}[d\,x]-\text{Sin}[d\,x]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\sqrt{2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\left(\frac{7}{8}+\frac{7\,i}{8}\right)\left(\text{Cos}\left[\frac{3\,c}{2}\right]-i\,\text{Sin}\left[\frac{3\,c}{2}\right]\right)\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\right.$$

$$\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\left(-\left(\left(i\left(\frac{\sqrt{-1+i}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.\right.\right.$$

$$\left(\sqrt{-1+i}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(4\sqrt{-1-i}\right.$$

$$\left.\left.\left.\left.\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Big/\left(1-\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)+$$

$$\left(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\left((-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\right.\right.$$

$$\left.\left.\left(\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right/\left(4\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\Big/$$

$$\left.\left.\left(1+\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\sqrt{2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Bigg)$$

Problem 401: Result more than twice size of optimal antiderivative.

$$\int(e\,\text{Sec}[c+d\,x])^{3/2}\,(a+i\,a\,\text{Tan}[c+d\,x])^{3/2}\,dx$$

Optimal (type 3, 571 leaves, 13 steps):

$$\frac{5\,i\,a^2\,(e\,\text{Sec}[c+d\,x])^{3/2}}{4\,d\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}-\frac{5\,i\,a^{5/2}\,e^{3/2}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]\text{Sec}[c+d\,x]}{4\,\sqrt{2}\,d\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}+$$

$$\frac{5\,i\,a^{5/2}\,e^{3/2}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]\text{Sec}[c+d\,x]}{4\,\sqrt{2}\,d\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}+$$

$$\left(5\,i\,a^{5/2}\,e^{3/2}\,\text{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,(a-i\,a\,\text{Tan}[c+d\,x])\right]\right.$$

$$\left.\text{Sec}[c+d\,x]\right)\Big/\left(8\,\sqrt{2}\,d\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)-$$

$$\left(5\,i\,a^{5/2}\,e^{3/2}\,\text{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,(a-i\,a\,\text{Tan}[c+d\,x])\right]\right.$$

$$\left.\text{Sec}[c+d\,x]\right)\Big/\left(8\,\sqrt{2}\,d\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)+$$

$$\frac{i\,a\,(e\,\text{Sec}[c+d\,x])^{3/2}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{2\,d}$$

Result (type 3, 5861 leaves):

$$\left(\text{Cos}[c+d\,x]^3\,(e\,\text{Sec}[c+d\,x])^{3/2}\right.$$

$$\left(\text{Sec}[c+d\,x]^2\left(\frac{1}{2}\,i\,\text{Cos}[c]+\frac{\text{Sin}[c]}{2}\right)+\text{Sec}[c+d\,x]\left(\frac{5}{4}\,i\,\text{Cos}[2\,c+d\,x]+\frac{5}{4}\,\text{Sin}[2\,c+d\,x]\right)\right)$$

$$\left.(a+i\,a\,\text{Tan}[c+d\,x])^{3/2}\right)\Big/\left(d\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])\right)+$$

$$\frac{1}{8\,d\,\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^{3/2}}\,5\,\text{Cos}[c+d\,x]^3\,\left(e\,\text{Sec}[c+d\,x]\right)^{3/2}$$

$$\left(\frac{1}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\,(1+i)\,\text{Cos}[c]\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\text{Sin}[c]\,\sqrt{\frac{i-\text{Tan}\left[\frac{d\,x}{2}\right]}{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}\right.$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]\,\left((2-2\,i)\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,-\sqrt{2}\,\text{Log}\left[\left((1+i)\,\left(2-2\,i\,\text{Cot}\left[\frac{c}{2}\right]\right)\,\text{Sin}\left[\frac{c}{2}\right]^2\right.\right.\right.$$

$$\left(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]-2\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\,+\text{Cot}\left[\frac{c}{2}\right]\,\left(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\right.\right.$$

$$\left.\left.\left.\frac{d\,x}{2}\right]+2\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left.\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\,\left(-\text{Sin}\left[\frac{c}{2}\right]\,\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+\text{Cos}\left[\frac{c}{2}\right]\,\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\right]$$

$$\sqrt{-1+\text{Sin}[c]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\,+\sqrt{2}\,\text{Log}\left[-\left(\left((2-2\,i)\,\left(\text{Cos}\left[\frac{c}{2}\right]+i\,\text{Sin}\left[\frac{c}{2}\right]\right)\right.\right.\right.$$

$$\left(\text{Sin}\left[\frac{c}{2}\right]\,\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,-\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+\right.\right.$$

$$\left.2\,i\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\text{Cos}\left[\frac{c}{2}\right]\,\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,+\right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,i\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\,\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\,\left(\text{Cos}\left[\frac{c}{2}\right]\,\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+\right.\right.$$

$$\left.\left.\left.\left.\left.\text{Sin}\left[\frac{c}{2}\right]\,\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\right)\right]\,\sqrt{1+\text{Sin}[c]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)-$$

$$\text{Sin}\left[\frac{c}{2}\right] \left((2+2\,i) \sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]} + \sqrt{2}\,\text{Log}\left[\left((1+i)\left(2-2\,i\,\text{Cot}\left[\frac{c}{2}\right]\right)\text{Sin}\left[\frac{c}{2}\right]^2\right.\right.\right.$$

$$\left(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]} + \sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right] - 2\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]} + \text{Cot}\left[\frac{c}{2}\right]\left(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]} + \sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\right[$$

$$\left.\left.\left.\frac{d\,x}{2}\right] + 2\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right) \Big/ \left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left.\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(-\text{Sin}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+\text{Cos}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\right]$$

$$\sqrt{-1+\text{Sin}[c]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]} + \sqrt{2}\,\text{Log}\left[-\left(\left((2-2\,i)\left(\text{Cos}\left[\frac{c}{2}\right]+i\,\text{Sin}\left[\frac{c}{2}\right]\right)\right.\right.\right.$$

$$\left(\text{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]} - \sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right] + \right.\right.$$

$$\left.2\,i\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right) + \text{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]} + \right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right] + 2\,i\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right) \Big/$$

$$\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right) + \right.\right.$$

$$\left.\left.\left.\left.\text{Sin}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\right)\right]\sqrt{1+\text{Sin}[c]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right) -$$

$$\left((1+i)\,\text{Cos}[2\,c]^2\,\text{Cos}[d\,x]\,\text{Sec}[c+d\,x]\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])$$

$$\left((1+i)\left(\cos\left[\frac{c}{2}\right]-i\sin\left[\frac{c}{2}\right]\right)\sqrt{i-\tan\left[\frac{dx}{2}\right]}+\right.$$

$$\sqrt{2}\,\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\cos\left[\frac{c}{2}\right]-i\sin\left[\frac{c}{2}\right]\right)\sqrt{i+\tan\left[\frac{dx}{2}\right]}}{\sqrt{i-\tan\left[\frac{dx}{2}\right]}}\right]\sin[c]\sqrt{i+\tan\left[\frac{dx}{2}\right]}+$$

$$i\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\cos\left[\frac{c}{2}\right]-i\sin\left[\frac{c}{2}\right]\right)\sqrt{i+\tan\left[\frac{dx}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\tan\left[\frac{dx}{2}\right]}}\right]$$

$$\left.\left.\left.\sin[c]\sqrt{i+\tan\left[\frac{dx}{2}\right]}\right)\right)\Big/\left(\sqrt{i-\tan\left[\frac{dx}{2}\right]}\right.$$

$$\left(-\left(\left(\left(\frac{1}{4}+\frac{i}{4}\right)\cos[2c]\sec\left[\frac{dx}{2}\right]^2\left(\cos\left[\frac{c}{2}\right]-i\sin\left[\frac{c}{2}\right]\right)\sqrt{\cos[dx]+i\sin[dx]}\right.\right.\right.$$

$$\left((1+i)\left(\cos\left[\frac{c}{2}\right]-i\sin\left[\frac{c}{2}\right]\right)\sqrt{i-\tan\left[\frac{dx}{2}\right]}+\sqrt{2}\,\text{ArcTan}\left[\right.\right.$$

$$\left.\frac{(-1)^{1/4}\left(\cos\left[\frac{c}{2}\right]-i\sin\left[\frac{c}{2}\right]\right)\sqrt{i+\tan\left[\frac{dx}{2}\right]}}{\sqrt{i-\tan\left[\frac{dx}{2}\right]}}\right]\sin[c]\sqrt{i+\tan\left[\frac{dx}{2}\right]}+$$

$$i\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\cos\left[\frac{c}{2}\right]-i\sin\left[\frac{c}{2}\right]\right)\sqrt{i+\tan\left[\frac{dx}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\tan\left[\frac{dx}{2}\right]}}\right]$$

$$\left.\left.\left.\text{Sin}[c]\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Big/\left(\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)-$$

$$\left(\left(\frac{1}{2}+\frac{\text{i}}{2}\right)\text{Cos}[2\,c]\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{i}\,\text{Cos}[d\,x]-\text{Sin}[d\,x]\right)\right.$$

$$\left((1+\text{i})\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\right.$$

$$\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\text{Sin}[c]$$

$$\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+\text{i}\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+\text{i}}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\text{i}}\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\text{Sin}[c]\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Big/\left(\sqrt{\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x]}\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)-$$

$$\frac{1}{\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}(1+\text{i})\,\text{Cos}[2\,c]\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x]}$$

$$\left(-\frac{\left(\frac{1}{4}+\frac{\text{i}}{4}\right)\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}+\left(\text{ArcTan}\left[\right.\right.\right.$$

$$\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\Big]\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\text{Sin}[c]\Bigg)\Bigg/\Bigg(2\sqrt{2}$$

$$\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+\Bigg(i\,\text{ArcTan}\Big[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\Big]$$

$$\text{Sec}\left[\frac{d\,x}{2}\right]^2\text{Sin}[c]\Bigg)\Bigg/\Bigg(2\sqrt{2}\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+$$

$$\Bigg(i\sqrt{2}\,\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg(\frac{\sqrt{-1+i}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+$$

$$\Bigg(\sqrt{-1+i}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg/\Bigg(4\sqrt{-1-i}$$

$$\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\Bigg)\Bigg)\Bigg)\Bigg/\Bigg(1-\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+$$

$$\Bigg(\sqrt{2}\,\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+$$

$$\Bigg((-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg/\Bigg(4$$

$$\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\Bigg)\Bigg)\Bigg)\Bigg/\Bigg(1+\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)$$

$$\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^{3/2}-\frac{1}{8\,d\,\left(\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]\right)^{3/2}}$$

$$5\,\mathrm{i}\,\mathrm{Cos}[c+d\,x]^3\,\left(e\,\mathrm{Sec}[c+d\,x]\right)^{3/2}\left(\frac{1}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right.$$

$$\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\mathrm{Cos}[2\,c]\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}$$

$$\left(\mathrm{Cos}\left[\frac{c}{2}\right]\left(\left(-2+2\,\mathrm{i}\right)\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\right.\right.$$

$$\sqrt{2}\,\mathrm{Log}\left[\left(\left(2+2\,\mathrm{i}\right)\mathrm{Cos}\left[\frac{d\,x}{2}\right]\left(1-\mathrm{i}\,\mathrm{Cot}\left[\frac{c}{2}\right]\right)\mathrm{Sin}\left[\frac{c}{2}\right]^2\left(\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}+\right.\right.\right.$$

$$\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]-2\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\mathrm{Cot}\left[\frac{c}{2}\right]$$

$$\left(-\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left.\left.\left.\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left.\left(\mathrm{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]+\mathrm{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right)\right)\right]\sqrt{-1+\mathrm{Sin}[c]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}-$$

$$\sqrt{2}\,\mathrm{Log}\left[\left(\left(2-2\,\mathrm{i}\right)\mathrm{Cos}\left[\frac{d\,x}{2}\right]\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}-\right.\right.\right.\right.$$

$$\left.\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\mathrm{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}+\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left.\left.\left.\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left.\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\right)\right]\sqrt{1+\mathrm{Sin}[c]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\mathrm{Sin}\left[\frac{c}{2}\right]\left((2+2\,\mathrm{i})\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\mathrm{Log}\left[\left((2+2\,\mathrm{i})\,\mathrm{Cos}\left[\frac{d\,x}{2}\right]\left(1-\mathrm{i}\,\mathrm{Cot}\left[\frac{c}{2}\right]\right)\right.\right.\right.$$

$$\mathrm{Sin}\left[\frac{c}{2}\right]^2\left(\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]-\right.$$

$$2\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\mathrm{Cot}\left[\frac{c}{2}\right]\left(-\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}+\right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left.\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\right)\right]$$

$$\sqrt{-1+\mathrm{Sin}[c]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\mathrm{Log}\left[\left((2-2\,\mathrm{i})\,\mathrm{Cos}\left[\frac{d\,x}{2}\right]\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.\right.$$

$$\left(\mathrm{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}-\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+\right.\right.$$

$$\left.2\,\mathrm{i}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+\mathrm{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}+\right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\right.\right.$$

$$\left.\left.\left.\left.\left.\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\right)\right]\sqrt{1+\mathrm{Sin}[c]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)-$$

$$\left((1+i)\,\text{Cos}[d\,x]\,\text{Sec}[c+d\,x]\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\text{Sin}[2\,c]^2\right.$$

$$\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)$$

$$\left((1+i)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}+\right.$$

$$\sqrt{2}\,\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$i\,\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Bigg/\left(\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left(-\left(\left(\left(\frac{1}{4}+\frac{i}{4}\right)\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\text{Sin}[2\,c]\,\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\right.\right.\right.\right.$$

$$\left((1+i)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\text{ArcTan}\right[$$

$$\left.\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$\left.\left.\left.\mathrm{i}\sqrt{2}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\mathrm{Sin}[c]\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\middle/\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)-$$

$$\left(\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\mathrm{Sin}[2\,c]\left(\mathrm{i}\,\mathrm{Cos}[d\,x]-\mathrm{Sin}[d\,x]\right)\right.$$

$$\left((1+\mathrm{i})\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\right.$$

$$\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\mathrm{Sin}[c]$$

$$\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\mathrm{i}\sqrt{2}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\mathrm{Sin}[c]\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\middle/\left(\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)-$$

$$\frac{1}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}(1+\mathrm{i})\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\mathrm{Sin}[2\,c]\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}$$

$$\left(-\frac{\left(\frac{1}{4}+\frac{i}{4}\right)\text{Sec}\left[\frac{dx}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}+\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]\text{Sec}\left[\frac{dx}{2}\right]^2\text{Sin}[c]\right)\Bigg/\left(2\sqrt{2}\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right)+\left(i\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]\text{Sec}\left[\frac{dx}{2}\right]^2\text{Sin}[c]\right)\Bigg/\left(2\sqrt{2}\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right)+\left(i\sqrt{2}\,\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\left(\frac{\sqrt{-1+i}\,\text{Sec}\left[\frac{dx}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}+\left(\sqrt{-1+i}\,\text{Sec}\left[\frac{dx}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right)\Bigg/\left(4\sqrt{-1-i}\left(i-\text{Tan}\left[\frac{dx}{2}\right]\right)^{3/2}\right)\right)\right)\Bigg/$$

$$\left(1-\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{dx}{2}\right]\right)}{i-\text{Tan}\left[\frac{dx}{2}\right]}\right)+\left(\sqrt{2}\,\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right.$$

$$\left(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{dx}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}+\left((-1)^{1/4}\,\text{Sec}\left[\frac{dx}{2}\right]^2\right.\right.$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg/\left(4\left(\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\Bigg)\Bigg)\Bigg/$$

$$\left(1+\frac{\text{i}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg)\Bigg)\Bigg)\Bigg)\left(a+\text{i}\,a\,\text{Tan}[c+d\,x]\right)^{3/2}$$

Problem 402: Result more than twice size of optimal antiderivative.

$$\int\sqrt{e\,\text{Sec}[c+d\,x]}\,\left(a+\text{i}\,a\,\text{Tan}[c+d\,x]\right)^{3/2}\,dx$$

Optimal (type 3, 364 leaves, 11 steps):

$$\frac{3\,\text{i}\,a^{3/2}\sqrt{e}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{\sqrt{2}\,d}-\frac{3\,\text{i}\,a^{3/2}\sqrt{e}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{\sqrt{2}\,d}-$$
$$\frac{1}{2\sqrt{2}\,d}3\,\text{i}\,a^{3/2}\sqrt{e}\,\text{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,\left(a+\text{i}\,a\,\text{Tan}[c+d\,x]\right)\right]+$$
$$\frac{1}{2\sqrt{2}\,d}3\,\text{i}\,a^{3/2}\sqrt{e}\,\text{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,\left(a+\text{i}\,a\,\text{Tan}[c+d\,x]\right)\right]+$$
$$\frac{\text{i}\,a\sqrt{e\,\text{Sec}[c+d\,x]}\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}}{d}$$

Result (type 3, 1488 leaves):

$$\Bigg(\text{Cos}[c+d\,x]\,\sqrt{e\,\text{Sec}[c+d\,x]}\,\left(\text{i}\,\text{Cos}[c]\,\sqrt{\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x]}+\text{Sin}[c]\,\sqrt{\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x]}\right)$$
$$\left(a+\text{i}\,a\,\text{Tan}[c+d\,x]\right)^{3/2}\Bigg)\Bigg/\left(d\left(\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x]\right)^{3/2}\right)+$$
$$\Bigg((3+3\,\text{i})\Bigg(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-$$
$$\text{i}\,\text{ArcTan}\left[\frac{\sqrt{-1+\text{i}}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\text{i}}\,\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\Bigg)$$
$$\text{Cos}[c+d\,x]\,\sqrt{e\,\text{Sec}[c+d\,x]}\,\left(\text{Cos}\left[\frac{3\,c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{3\,c}{2}\right]\right)$$

$$\left(\frac{3}{2}\,\text{Cos}[c]\,\sqrt{\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]}-\frac{3}{2}\,\mathrm{i}\,\text{Sin}[c]\,\sqrt{\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]}\right)$$

$$\left.\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^{3/2}\right)\Bigg/\left(d\,\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)\right.$$

$$\sqrt{2\,\mathrm{i}-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\,\left(\left(\left(\frac{3}{4}+\frac{3\,\mathrm{i}}{4}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.\right.$$

$$\left.\mathrm{i}\,\text{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\,\left(\text{Cos}\left[\frac{3\,c}{2}\right]-\right.$$

$$\left.\left.\mathrm{i}\,\text{Sin}\left[\frac{3\,c}{2}\right]\right)\,\sqrt{\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]}\right)\Bigg/\left(\sqrt{2\,\mathrm{i}-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\left(\frac{3}{2}+\frac{3\,\mathrm{i}}{2}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.\mathrm{i}\,\text{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\,\text{Sec}\left[\frac{d\,x}{2}\right]^2$$

$$\left.\left(\text{Cos}\left[\frac{3\,c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{3\,c}{2}\right]\right)\,\sqrt{\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg/$$

$$\left(2\,\mathrm{i}-2\,\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}+\left(\left(\frac{3}{2}+\frac{3\,\mathrm{i}}{2}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.\left.\mathbb{i}\,\text{ArcTan}\left[\frac{\sqrt{-1+\mathbb{i}}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathbb{i}}\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\right.$$

$$\left.\left(\text{Cos}\left[\frac{3\,c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{3\,c}{2}\right]\right)\left(\mathbb{i}\,\text{Cos}[d\,x]-\text{Sin}[d\,x]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(\sqrt{\text{Cos}[d\,x]+\mathbb{i}\,\text{Sin}[d\,x]}\,\sqrt{2\,\mathbb{i}-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left((3+3\,\mathbb{i})\left(\text{Cos}\left[\frac{3\,c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{3\,c}{2}\right]\right)\sqrt{\text{Cos}[d\,x]+\mathbb{i}\,\text{Sin}[d\,x]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left(-\left(\left(\mathbb{i}\left(\frac{\sqrt{-1+\mathbb{i}}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-\mathbb{i}}\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.\right.\right.$$

$$\left(\sqrt{-1+\mathbb{i}}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(4\sqrt{-1-\mathbb{i}}\right.$$

$$\left.\left.\left.\left.\left(\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Big/\left(1-\frac{\mathbb{i}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)+$$

$$\left(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\left((-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\right.\right.$$

$$\left.\left.\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(4\left(\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\Big/$$

$$\left.\left.\left(1+\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\sqrt{2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)$$

Problem 403: Result more than twice size of optimal antiderivative.

$$\int\frac{\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^{3/2}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\,dx$$

Optimal (type 3, 520 leaves, 12 steps):

$$\frac{\mathrm{i}\sqrt{2}\,a^{5/2}\,\mathrm{ArcTan}\left[1-\frac{\sqrt{2}\sqrt{e}\sqrt{a-\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]\mathrm{Sec}[c+d\,x]}{d\sqrt{e}\sqrt{a-\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}\sqrt{a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}}-$$

$$\frac{\mathrm{i}\sqrt{2}\,a^{5/2}\,\mathrm{ArcTan}\left[1+\frac{\sqrt{2}\sqrt{e}\sqrt{a-\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]\mathrm{Sec}[c+d\,x]}{d\sqrt{e}\sqrt{a-\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}\sqrt{a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}}-$$

$$\left(\mathrm{i}\,a^{5/2}\,\mathrm{Log}\left[a-\frac{\sqrt{2}\sqrt{a}\sqrt{e}\sqrt{a-\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\left(a-\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)\right]\right.$$

$$\left.\mathrm{Sec}[c+d\,x]\right)\Big/\left(\sqrt{2}\,d\sqrt{e}\sqrt{a-\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}\sqrt{a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}\right)+\left(\mathrm{i}\,a^{5/2}\right.$$

$$\left.\mathrm{Log}\left[a+\frac{\sqrt{2}\sqrt{a}\sqrt{e}\sqrt{a-\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\left(a-\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)\right]\mathrm{Sec}[c+d\,x]\right)\Big/$$

$$\left(\sqrt{2}\,d\sqrt{e}\sqrt{a-\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}\sqrt{a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}\right)-\frac{4\,\mathrm{i}\,a\sqrt{a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}}{d\sqrt{e\,\mathrm{Sec}[c+d\,x]}}$$

Result (type 3, 5881 leaves):

$$-\frac{4\,\mathrm{i}\,\mathrm{Cos}[c]\,\mathrm{Cos}[c+d\,x]\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^{3/2}}{d\sqrt{e\,\mathrm{Sec}[c+d\,x]}\left(\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]\right)}-\frac{4\,\mathrm{Cos}[c+d\,x]\,\mathrm{Sin}[c]\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^{3/2}}{d\sqrt{e\,\mathrm{Sec}[c+d\,x]}\left(\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]\right)}-$$

$$\frac{1}{d\sqrt{e\,\mathrm{Sec}[c+d\,x]}\left(\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]\right)^{3/2}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}$$

$$\left(1+\mathrm{i}\right)\mathrm{Cos}[c]\,\mathrm{Cos}[c+d\,x]\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\mathrm{Sin}[c]\sqrt{\frac{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}$$

$$\left(\mathrm{Cos}\left[\frac{c}{2}\right]\left(\left(2-2\,\mathrm{i}\right)\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}-\sqrt{2}\,\mathrm{Log}\left[\left(1+\mathrm{i}\right)\left(2-2\,\mathrm{i}\,\mathrm{Cot}\left[\frac{c}{2}\right]\right)\mathrm{Sin}\left[\frac{c}{2}\right]^2\right.\right.\right.$$

$$\Bigg(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\Big[\frac{d\,x}{2}\Big]-2\,\sqrt{\mathbb{i}-\text{Tan}\Big[\frac{d\,x}{2}\Big]}$$

$$\sqrt{\mathbb{i}+\text{Tan}\Big[\frac{d\,x}{2}\Big]}+\text{Cot}\Big[\frac{c}{2}\Big]\,\Bigg(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\Big[\frac{d\,x}{2}\Big]+$$

$$2\,\sqrt{\mathbb{i}-\text{Tan}\Big[\frac{d\,x}{2}\Big]}\,\sqrt{\mathbb{i}+\text{Tan}\Big[\frac{d\,x}{2}\Big]}\Bigg)\Bigg)\Bigg)\Bigg/\,\Bigg(\Big(\text{Cos}\Big[\frac{c}{2}\Big]-\text{Sin}\Big[\frac{c}{2}\Big]\Big)$$

$$\Big(\text{Cos}\Big[\frac{c}{2}\Big]+\text{Sin}\Big[\frac{c}{2}\Big]\Big)\,\Big(-\text{Sin}\Big[\frac{c}{2}\Big]\,\Big(-1+\text{Tan}\Big[\frac{d\,x}{2}\Big]\Big)+\text{Cos}\Big[\frac{c}{2}\Big]\,\Big(1+\text{Tan}\Big[\frac{d\,x}{2}\Big]\Big)\Big)\Bigg)\Bigg)\Bigg]$$

$$\sqrt{-1+\text{Sin}[c]}\,\sqrt{\mathbb{i}+\text{Tan}\Big[\frac{d\,x}{2}\Big]}+\sqrt{2}\,\text{Log}\Bigg[-\Bigg(\Bigg(\Big(2-2\,\mathbb{i}\Big)\,\Big(\text{Cos}\Big[\frac{c}{2}\Big]+\mathbb{i}\,\text{Sin}\Big[\frac{c}{2}\Big]\Big)$$

$$\Bigg(\text{Sin}\Big[\frac{c}{2}\Big]\,\Bigg(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}-\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\Big[\frac{d\,x}{2}\Big]+2\,\mathbb{i}\,\sqrt{\mathbb{i}-\text{Tan}\Big[\frac{d\,x}{2}\Big]}$$

$$\sqrt{\mathbb{i}+\text{Tan}\Big[\frac{d\,x}{2}\Big]}\Bigg)+\text{Cos}\Big[\frac{c}{2}\Big]\,\Bigg(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{1+\text{Sin}[c]}$$

$$\text{Tan}\Big[\frac{d\,x}{2}\Big]+2\,\mathbb{i}\,\sqrt{\mathbb{i}-\text{Tan}\Big[\frac{d\,x}{2}\Big]}\,\sqrt{\mathbb{i}+\text{Tan}\Big[\frac{d\,x}{2}\Big]}\Bigg)\Bigg)\Bigg)\Bigg/\,\Bigg(\Big(\text{Cos}\Big[\frac{c}{2}\Big]-\text{Sin}\Big[\frac{c}{2}\Big]\Big)$$

$$\Big(\text{Cos}\Big[\frac{c}{2}\Big]+\text{Sin}\Big[\frac{c}{2}\Big]\Big)\,\Big(\text{Cos}\Big[\frac{c}{2}\Big]\,\Big(-1+\text{Tan}\Big[\frac{d\,x}{2}\Big]\Big)+\text{Sin}\Big[\frac{c}{2}\Big]\,\Big(1+\text{Tan}\Big[\frac{d\,x}{2}\Big]\Big)\Big)\Bigg)\Bigg)\Bigg]$$

$$\sqrt{1+\text{Sin}[c]}\,\sqrt{\mathbb{i}+\text{Tan}\Big[\frac{d\,x}{2}\Big]}\Bigg)-\text{Sin}\Big[\frac{c}{2}\Big]\,\Bigg(\Big(2+2\,\mathbb{i}\Big)\,\sqrt{\mathbb{i}-\text{Tan}\Big[\frac{d\,x}{2}\Big]}+$$

$$\sqrt{2}\,\text{Log}\Bigg[\Bigg(\Big(1+\mathbb{i}\Big)\,\Big(2-2\,\mathbb{i}\,\text{Cot}\Big[\frac{c}{2}\Big]\Big)\,\text{Sin}\Big[\frac{c}{2}\Big]^2\,\Bigg(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}$$

$$\text{Tan}\Big[\frac{d\,x}{2}\Big]-2\,\sqrt{\mathbb{i}-\text{Tan}\Big[\frac{d\,x}{2}\Big]}\,\sqrt{\mathbb{i}+\text{Tan}\Big[\frac{d\,x}{2}\Big]}+\text{Cot}\Big[\frac{c}{2}\Big]\,\Bigg(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+$$

$$\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\Big[\frac{d\,x}{2}\Big]+2\,\sqrt{\mathbb{i}-\text{Tan}\Big[\frac{d\,x}{2}\Big]}\,\sqrt{\mathbb{i}+\text{Tan}\Big[\frac{d\,x}{2}\Big]}\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Bigg(\Big(\text{Cos}\Big[\frac{c}{2}\Big]-\text{Sin}\Big[\frac{c}{2}\Big]\Big)\,\Big(\text{Cos}\Big[\frac{c}{2}\Big]+\text{Sin}\Big[\frac{c}{2}\Big]\Big)\,\Big(-\text{Sin}\Big[\frac{c}{2}\Big]\,\Big(-1+\text{Tan}\Big[\frac{d\,x}{2}\Big]\Big)+$$

$$\text{Cos}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\Big)\Big)\Big)\Big]\sqrt{-1+\text{Sin}[c]}\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\text{Log}\Big[$$

$$-\Bigg(\Bigg(\left(2-2\,\mathbb{i}\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\Bigg(\text{Sin}\left[\frac{c}{2}\right]\Bigg(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}-\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\Big[$$

$$\frac{d\,x}{2}\Big]+2\,\mathbb{i}\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+\text{Cos}\left[\frac{c}{2}\right]\Bigg(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}+$$

$$\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathbb{i}\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Bigg(\Bigg(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\Bigg(\text{Cos}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+$$

$$\text{Sin}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\Bigg)\Bigg)\Big]\sqrt{1+\text{Sin}[c]}\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)$$

$$\left(a+\mathbb{i}\,a\,\text{Tan}[c+d\,x]\right)^{3/2}+\Bigg(\left(1+\mathbb{i}\right)\text{Cos}[2\,c]^2\,\text{Cos}[d\,x]\,\Bigg(\text{Cos}\left[\frac{c}{2}\right]-$$

$$\mathbb{i}$$

$$\text{Sin}\left[\frac{c}{2}\right]\Bigg)$$

$$\Bigg(\left(1+\mathbb{i}\right)\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$\sqrt{2}$$

$$\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\text{Sin}[c]$$

$$\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$i\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)$$

$$\left.(a+i\,a\,\text{Tan}[c+d\,x])^{3/2}\right)\Big/\left(d\right.$$

$$\sqrt{e\,\text{Sec}[c+d\,x]}$$
$$\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}$$
$$\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}$$

$$\left(-\left(\left(\left(\frac{1}{4}+\frac{i}{4}\right)\text{Cos}[2\,c]\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\right.\right.\right.$$

$$\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\,\left((1+i)\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.+$$

$$\sqrt{2}\,\text{ArcTan}\left[\frac{(-1)^{1/4}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\;+$$

$$i\sqrt{2}\,\text{ArcTan}\Big[\frac{\sqrt{-1+i}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}}\Big]$$

$$\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}\Bigg)\Bigg)\Bigg/\left(i-\text{Tan}\left[\frac{d x}{2}\right]\right)^{3/2}\Bigg)-$$

$$\Bigg(\left(\frac{1}{2}+\frac{i}{2}\right)\text{Cos}[2\,c]\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\left(i\,\text{Cos}[d\,x]-\text{Sin}[d\,x]\right)$$

$$\Bigg((1+i)\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}+\sqrt{2}$$

$$\text{ArcTan}\Big[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}}\Big]\,\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}+i\sqrt{2}$$

$$\text{ArcTan}\Big[\frac{\sqrt{-1+i}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}}\Big]\,\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}\Bigg)\Bigg)\Bigg/$$

$$\left(\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\,\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}\right)-\frac{1}{\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}}$$

$$(1+i)\,\text{Cos}[2\,c]\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}$$

$$\Bigg(-\frac{\left(\frac{1}{4}+\frac{i}{4}\right)\text{Sec}\left[\frac{d x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}}+$$

$$\frac{\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}}\right]\text{Sec}\left[\frac{d x}{2}\right]^2\text{Sin}[c]}{2\sqrt{2}\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}}+$$

$$\left(i\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}}\right]\text{Sec}\left[\frac{d x}{2}\right]^2\text{Sin}[c]\right)\Bigg/$$

$$\left(2\sqrt{2}\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}\right)+$$

$$\left(i\sqrt{2}\,\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}\left(\frac{\sqrt{-1+i}\,\text{Sec}\left[\frac{d x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}}+\right.\right.$$

$$\left(\sqrt{-1+i}\,\text{Sec}\left[\frac{d x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}\right)\Big/\left(4\sqrt{-1-i}\right.$$

$$\left.\left.\left.\left(i-\text{Tan}\left[\frac{d x}{2}\right]\right)^{3/2}\right)\right)\right)\Bigg/\left(1-\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{d x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d x}{2}\right]}\right)+$$

$$\left(\sqrt{2}\,\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}\left(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}}+\right.\right.$$

$$\left((-1)^{1/4}\,\text{Sec}\left[\frac{d x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}\right)\Big/$$

$$\left.\left.\left.\left(4\left(i-\text{Tan}\left[\frac{d x}{2}\right]\right)^{3/2}\right)\right)\right)\Bigg/\left(1+\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{d x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d x}{2}\right]}\right)\right)\right)+$$

$$\frac{1}{d\sqrt{e\,\mathrm{Sec}[c+d\,x]}\,\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^{3/2}}\,i\,\mathrm{Cos}[c+d\,x]\left(\frac{1}{\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Cos}[2\,c]\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]}\right.$$

$$\left(\mathrm{Cos}\left[\frac{c}{2}\right]\left(\left(-2+2\,i\right)\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\mathrm{Log}\left[\left(\left(2+2\,i\right)\mathrm{Cos}\left[\frac{d\,x}{2}\right]\left(1-i\,\mathrm{Cot}\left[\frac{c}{2}\right]\right)\right.\right.\right.\right.$$

$$\mathrm{Sin}\left[\frac{c}{2}\right]^2\left(\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]-\right.$$

$$2\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\mathrm{Cot}\left[\frac{c}{2}\right]\left(-\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}+\right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left.\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]+\mathrm{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right)\right)\right)\right]$$

$$\sqrt{-1+\mathrm{Sin}[c]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}-\sqrt{2}\,\mathrm{Log}\left[\left(\left(2-2\,i\right)\mathrm{Cos}\left[\frac{d\,x}{2}\right]\left(\mathrm{Cos}\left[\frac{c}{2}\right]+i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.\right.$$

$$\left(\mathrm{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}-\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+\right.\right.$$

$$\left.2\,i\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+\mathrm{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}+\right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\,i\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left.\left.\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]-\mathrm{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right)\right)\right)\right]$$

$$\sqrt{1+\text{Sin}[c]}\ \sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+\text{Sin}\left[\frac{c}{2}\right]\ \Bigg(\left(2+2\,\mathrm{i}\right)\ \sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\ +$$

$$\sqrt{2}\ \text{Log}\Bigg[\Bigg(\left(2+2\,\mathrm{i}\right)\ \text{Cos}\left[\frac{d\,x}{2}\right]\ \left(1-\mathrm{i}\ \text{Cot}\left[\frac{c}{2}\right]\right)\ \text{Sin}\left[\frac{c}{2}\right]^2\ \Bigg(\sqrt{2}\ \sqrt{-1+\text{Sin}[c]}\ +$$

$$\sqrt{2}\ \sqrt{-1+\text{Sin}[c]}\ \text{Tan}\left[\frac{d\,x}{2}\right]-2\ \sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\ \sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\ +\text{Cot}\left[\frac{c}{2}\right]$$

$$\Bigg(-\sqrt{2}\ \sqrt{-1+\text{Sin}[c]}\ +\sqrt{2}\ \sqrt{-1+\text{Sin}[c]}\ \text{Tan}\left[\frac{d\,x}{2}\right]+2\ \sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}$$

$$\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)\Bigg)\Bigg/\ \left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\ \left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left(\text{Cos}\left[\frac{1}{2}\ (c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\ (c+d\,x)\right]\right)\right)\Bigg]\ \sqrt{-1+\text{Sin}[c]}\ \sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\ +$$

$$\sqrt{2}\ \text{Log}\Bigg[\Bigg(\left(2-2\,\mathrm{i}\right)\ \text{Cos}\left[\frac{d\,x}{2}\right]\ \left(\text{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\ \text{Sin}\left[\frac{c}{2}\right]\right)\ \Bigg(\text{Sin}\left[\frac{c}{2}\right]\ \Bigg(\sqrt{2}\ \sqrt{1+\text{Sin}[c]}\ -$$

$$\sqrt{2}\ \sqrt{1+\text{Sin}[c]}\ \text{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\ \sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\ \sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+$$

$$\text{Cos}\left[\frac{c}{2}\right]\ \Bigg(\sqrt{2}\ \sqrt{1+\text{Sin}[c]}\ +\sqrt{2}\ \sqrt{1+\text{Sin}[c]}\ \text{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\ \sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}$$

$$\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)\Bigg)\Bigg/\ \left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\ \left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left(\text{Cos}\left[\frac{1}{2}\ (c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\ (c+d\,x)\right]\right)\right)\Bigg]\ \sqrt{1+\text{Sin}[c]}\ \sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)-$$

$$\Bigg(\left(1+\mathrm{i}\right)\ \text{Cos}[d\,x]\ \text{Sec}[c+d\,x]\ \left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\ \text{Sin}\left[\frac{c}{2}\right]\right)\ \text{Sin}[2\,c]^2\ \left(\text{Cos}[d\,x]+\mathrm{i}\ \text{Sin}[d\,x]\right)$$

$$\left((1+i)\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\right.$$

$$\sqrt{2}\,\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\mathrm{Sin}[c]\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$i\sqrt{2}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\mathrm{Sin}[c]\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Big/\left(\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left(-\left(\left(\left(\frac{1}{4}+\frac{i}{4}\right)\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\mathrm{Sin}[2\,c]\sqrt{\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]}\right.\right.\right.\right.$$

$$\left((1+i)\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\mathrm{ArcTan}\left[\right.\right.$$

$$\left.\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\mathrm{Sin}[c]\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$i\sqrt{2}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\left.\operatorname{Sin}[c]\sqrt{\mathbb{i}+\operatorname{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Big/\left(\mathbb{i}-\operatorname{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)-$$

$$\left(\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\left(\operatorname{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\operatorname{Sin}\left[\frac{c}{2}\right]\right)\operatorname{Sin}[2\,c]\,\left(\mathbb{i}\operatorname{Cos}[d\,x]-\operatorname{Sin}[d\,x]\right)\right.$$

$$\left(\left(1+\mathbb{i}\right)\left(\operatorname{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\operatorname{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}-\operatorname{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\right.$$

$$\operatorname{ArcTan}\left[\frac{(-1)^{1/4}\left(\operatorname{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\operatorname{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\operatorname{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathbb{i}-\operatorname{Tan}\left[\frac{d\,x}{2}\right]}}\right]\operatorname{Sin}[c]$$

$$\sqrt{\mathbb{i}+\operatorname{Tan}\left[\frac{d\,x}{2}\right]}+\mathbb{i}\sqrt{2}\operatorname{ArcTan}\left[\frac{\sqrt{-1+\mathbb{i}}\left(\operatorname{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\operatorname{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\operatorname{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathbb{i}}\sqrt{\mathbb{i}-\operatorname{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\left.\operatorname{Sin}[c]\sqrt{\mathbb{i}+\operatorname{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Big/\left(\sqrt{\operatorname{Cos}[d\,x]+\mathbb{i}\operatorname{Sin}[d\,x]}\sqrt{\mathbb{i}-\operatorname{Tan}\left[\frac{d\,x}{2}\right]}\right)-$$

$$\frac{1}{\sqrt{\mathbb{i}-\operatorname{Tan}\left[\frac{d\,x}{2}\right]}}\left(1+\mathbb{i}\right)\left(\operatorname{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\operatorname{Sin}\left[\frac{c}{2}\right]\right)\operatorname{Sin}[2\,c]\sqrt{\operatorname{Cos}[d\,x]+\mathbb{i}\operatorname{Sin}[d\,x]}$$

$$\left(-\frac{\left(\frac{1}{4}+\frac{\mathbb{i}}{4}\right)\operatorname{Sec}\left[\frac{d\,x}{2}\right]^2\left(\operatorname{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\operatorname{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{\mathbb{i}-\operatorname{Tan}\left[\frac{d\,x}{2}\right]}}+\left(\operatorname{ArcTan}\right[\right.\right.$$

$$\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\Bigg]\ \text{Sec}\left[\frac{d\,x}{2}\right]^2\text{Sin}[c]\Bigg)\Bigg/\Bigg(2\sqrt{2}$$

$$\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+\Bigg(\mathrm{i}\,\text{ArcTan}\Bigg[\frac{\sqrt{-1+\mathrm{i}}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\Bigg]$$

$$\text{Sec}\left[\frac{d\,x}{2}\right]^2\text{Sin}[c]\Bigg)\Bigg/\left(2\sqrt{2}\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\Bigg(\mathrm{i}\sqrt{2}\ \text{Sin}[c]\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}$$

$$\left(\frac{\sqrt{-1+\mathrm{i}}\ \text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-\mathrm{i}}\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\Bigg(\sqrt{-1+\mathrm{i}}\ \text{Sec}\left[\frac{d\,x}{2}\right]^2\Bigg(\text{Cos}\left[\frac{c}{2}\right]-\right.$$

$$\left.\left.\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\Bigg)\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg/\left(4\sqrt{-1-\mathrm{i}}\left(\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Bigg/$$

$$\left(1-\frac{\mathrm{i}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\Bigg(\sqrt{2}\ \text{Sin}[c]\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}$$

$$\left(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\Bigg((-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\right.$$

$$\left.\left.\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg/\left(4\left(\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Bigg/$$

$$\left.\left.\left.\left.\left(1+\frac{i\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\right)\right)(a+i\,a\,\mathrm{Tan}[c+d\,x])^{3/2}$$

Problem 408: Result more than twice size of optimal antiderivative.

$$\int (e\,\mathrm{Sec}[c+d\,x])^{3/2}\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^{5/2}\,dx$$

Optimal (type 3, 612 leaves, 14 steps):

$$\frac{15\,i\,a^3\,(e\,\mathrm{Sec}[c+d\,x])^{3/2}}{8\,d\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}-\frac{15\,i\,a^{7/2}\,e^{3/2}\,\mathrm{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]\mathrm{Sec}[c+d\,x]}{8\,\sqrt{2}\,d\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}+$$

$$\frac{15\,i\,a^{7/2}\,e^{3/2}\,\mathrm{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]\mathrm{Sec}[c+d\,x]}{8\,\sqrt{2}\,d\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}+$$

$$\left(15\,i\,a^{7/2}\,e^{3/2}\,\mathrm{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\,(a-i\,a\,\mathrm{Tan}[c+d\,x])\right]\right.$$

$$\left.\mathrm{Sec}[c+d\,x]\right)\Big/\left(16\,\sqrt{2}\,d\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}\right)-$$

$$\left(15\,i\,a^{7/2}\,e^{3/2}\,\mathrm{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\,(a-i\,a\,\mathrm{Tan}[c+d\,x])\right]\right.$$

$$\left.\mathrm{Sec}[c+d\,x]\right)\Big/\left(16\,\sqrt{2}\,d\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}\right)+$$

$$\frac{3\,i\,a^2\,(e\,\mathrm{Sec}[c+d\,x])^{3/2}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}{4\,d}+\frac{i\,a\,(e\,\mathrm{Sec}[c+d\,x])^{3/2}\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^{3/2}}{3\,d}$$

Result (type 3, 5917 leaves):

$$\left(\mathrm{Cos}[c+d\,x]^4\,(e\,\mathrm{Sec}[c+d\,x])^{3/2}\left(\mathrm{Sec}[c+d\,x]^2\left(\frac{17}{12}\,i\,\mathrm{Cos}[2\,c]+\frac{17}{12}\,\mathrm{Sin}[2\,c]\right)+\right.\right.$$

$$\mathrm{Sec}[c+d\,x]^3\left(-\frac{1}{3}\,i\,\mathrm{Cos}[3\,c+d\,x]-\frac{1}{3}\,\mathrm{Sin}[3\,c+d\,x]\right)+$$

$$\left.\left.\mathrm{Sec}[c+d\,x]\left(\frac{15}{8}\,i\,\mathrm{Cos}[3\,c+d\,x]+\frac{15}{8}\,\mathrm{Sin}[3\,c+d\,x]\right)\right)(a+i\,a\,\mathrm{Tan}[c+d\,x])^{5/2}\right)\Big/$$

$$\left(d\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^2\right)+\frac{1}{16\,d\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^{5/2}}$$

$$15\,\mathrm{Cos}[c+d\,x]^4\,(e\,\mathrm{Sec}[c+d\,x])^{3/2}$$

$$\left(\frac{1}{\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\,(1+2\,\text{Cos}[2\,c])\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\text{Sin}[c]\,\sqrt{\frac{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}\right.$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]\,\left((2-2\,\mathrm{i})\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,-\sqrt{2}\,\text{Log}\left[\left((1+\mathrm{i})\,\left(2-2\,\mathrm{i}\,\text{Cot}\left[\frac{c}{2}\right]\right)\,\text{Sin}\left[\frac{c}{2}\right]^2\right.\right.\right.\right.$$

$$\left(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]-2\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\,+\text{Cot}\left[\frac{c}{2}\right]\,\left(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\right[$$

$$\left.\left.\left.\frac{d\,x}{2}\right]+2\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left.\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\,\left(-\text{Sin}\left[\frac{c}{2}\right]\,\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+\text{Cos}\left[\frac{c}{2}\right]\,\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\right)\Big]$$

$$\sqrt{-1+\text{Sin}[c]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\,+\sqrt{2}\,\text{Log}\Big[-\left(\left((2-2\,\mathrm{i})\,\left(\text{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\right.\right.$$

$$\left(\text{Sin}\left[\frac{c}{2}\right]\,\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,-\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+\right.\right.$$

$$\left.2\,\mathrm{i}\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\text{Cos}\left[\frac{c}{2}\right]\,\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,+\right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\,\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\,\left(\text{Cos}\left[\frac{c}{2}\right]\,\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+\right.\right.$$

$$\left.\left.\left.\left.\text{Sin}\left[\frac{c}{2}\right]\,\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\right)\Big]\,\sqrt{1+\text{Sin}[c]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)-$$

$$\text{Sin}\left[\frac{c}{2}\right]\,\left((2+2\,\mathrm{i})\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,+\sqrt{2}\,\text{Log}\left[\left((1+\mathrm{i})\,\left(2-2\,\mathrm{i}\,\text{Cot}\left[\frac{c}{2}\right]\right)\,\text{Sin}\left[\frac{c}{2}\right]^2\right.\right.\right.$$

$$\left(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]-2\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+\text{Cot}\left[\frac{c}{2}\right]\left(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Bigg)\Bigg/\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(-\text{Sin}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+\text{Cos}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\Bigg]\sqrt{-1+\text{Sin}[c]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\text{Log}\Bigg[-\Bigg(\Bigg(\left(2-2\,\mathrm{i}\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}-\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\text{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Bigg)\Bigg/\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+\text{Sin}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\Bigg)\Bigg]\sqrt{1+\text{Sin}[c]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)-$$

$$\Bigg(\left(1+\mathrm{i}\right)\text{Cos}[3\,c]^2\,\text{Cos}[d\,x]\,\text{Sec}[c+d\,x]\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]\right)\Bigg(\left(1+\mathrm{i}\right)\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$\sqrt{2}\,\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}+$$

$$i\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]$$

$$\left.\left.\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right)\right)\Big/\left(\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}\right.$$

$$\left(-\left(\left(\left(\frac{1}{4}+\frac{i}{4}\right)\text{Cos}[3c]\,\text{Sec}\left[\frac{dx}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{Cos}[dx]+i\,\text{Sin}[dx]}\right.\right.\right.\right.$$

$$\left((1+i)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}+\sqrt{2}\,\text{ArcTan}\right[$$

$$\left.\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}+$$

$$i\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]$$

$$\left.\left.\left.\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right)\right)\Big/\left(i-\text{Tan}\left[\frac{dx}{2}\right]\right)^{3/2}\right)-$$

$$\left(\left(\frac{1}{2}+\frac{i}{2}\right)\text{Cos}[3c]\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\left(i\,\text{Cos}[d\,x]-\text{Sin}[d\,x]\right)\right.$$

$$\left((1+i)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\right.$$

$$\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\text{Sin}[c]$$

$$\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}+i\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Big/\left(\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)-$$

$$\frac{1}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}(1+i)\,\text{Cos}[3c]\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}$$

$$\left(-\frac{\left(\frac{1}{4}+\frac{i}{4}\right)\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}+\left(\text{ArcTan}\left[\right.\right.\right.$$

$$\left.\left.\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\text{Sec}\left[\frac{d\,x}{2}\right]^2\text{Sin}[c]\right)\Big/\left(2\sqrt{2}\right.$$

$$\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+\left(\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right.$$

$$\left.\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\mathrm{Sin}[c]\right)\Bigg/\left(2\sqrt{2}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\mathrm{i}\sqrt{2}\,\mathrm{Sin}[c]\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\left(\frac{\sqrt{-1+\mathrm{i}}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.$$

$$\left(\sqrt{-1+\mathrm{i}}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg/\left(4\sqrt{-1-\mathrm{i}}\right.$$

$$\left.\left.\left.\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Bigg/\left(1-\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\sqrt{2}\,\mathrm{Sin}[c]\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\left(\frac{(-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.$$

$$\left((-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg/\left(4\right.$$

$$\left.\left.\left.\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Bigg/\left(1+\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg)\Bigg)\Bigg)\Bigg)$$

$$(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x])^{5/2}-\frac{1}{16\,d\,(\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x])^{5/2}}$$

15

i

Cos[

c +

d

$$x]^4$$

$$(e\,\text{Sec}[c+d\,x])^{3/2}\left(\frac{1}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right.$$

$$\left(\frac{1}{2}+\frac{i}{2}\right)$$
$$\text{Cos}[c]$$
$$(-1+2\,\text{Cos}[2\,c])$$
$$\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)$$
$$\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]\left((-2+2\,i)\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}+\right.\right.$$

$$\sqrt{2}\,\text{Log}\left[\left((2+2\,i)\,\text{Cos}\left[\frac{d\,x}{2}\right]\left(1-i\,\text{Cot}\left[\frac{c}{2}\right]\right)\text{Sin}\left[\frac{c}{2}\right]^2\left(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\right.\right.\right.$$

$$\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]-2\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}+\text{Cot}\left[\frac{c}{2}\right]$$

$$\left(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left.\left.\left.\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left.\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)\right)\right]\sqrt{-1+\text{Sin}[c]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}-$$

$$\sqrt{2}\,\text{Log}\left[\left((2-2\,i)\,\text{Cos}\left[\frac{d\,x}{2}\right]\left(\text{Cos}\left[\frac{c}{2}\right]+i\,\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}-\right.\right.\right.\right.$$

$$\left.\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,i\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\text{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,i\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\sqrt{\mathrm{i} + \mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\Bigg)\Bigg)\Bigg)\Bigg) \Bigg/ \Bigg(\Bigg(\left(\mathrm{Cos}\left[\frac{c}{2}\right] - \mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right] + \mathrm{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left(\mathrm{Cos}\left[\frac{1}{2}\,(c + d\,x)\right] - \mathrm{Sin}\left[\frac{1}{2}\,(c + d\,x)\right]\right)\Bigg)\Bigg)\Bigg]\;\sqrt{1 + \mathrm{Sin}[c]}\;\sqrt{\mathrm{i} + \mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\Bigg) +$$

$$\mathrm{Sin}\left[\frac{c}{2}\right]\;\Bigg(\Bigg((2 + 2\,\mathrm{i})\;\sqrt{\mathrm{i} - \mathrm{Tan}\left[\frac{d\,x}{2}\right]} + \sqrt{2}\;\mathrm{Log}\Bigg[\Bigg((2 + 2\,\mathrm{i})\;\mathrm{Cos}\left[\frac{d\,x}{2}\right]\left(1 - \mathrm{i}\;\mathrm{Cot}\left[\frac{c}{2}\right]\right)$$

$$\mathrm{Sin}\left[\frac{c}{2}\right]^2\Bigg(\sqrt{2}\;\sqrt{-1 + \mathrm{Sin}[c]} + \sqrt{2}\;\sqrt{-1 + \mathrm{Sin}[c]}\;\mathrm{Tan}\left[\frac{d\,x}{2}\right] -$$

$$2\,\sqrt{\mathrm{i} - \mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\sqrt{\mathrm{i} + \mathrm{Tan}\left[\frac{d\,x}{2}\right]} + \mathrm{Cot}\left[\frac{c}{2}\right]\Bigg(-\sqrt{2}\;\sqrt{-1 + \mathrm{Sin}[c]} +$$

$$\sqrt{2}\;\sqrt{-1 + \mathrm{Sin}[c]}\;\mathrm{Tan}\left[\frac{d\,x}{2}\right] + 2\,\sqrt{\mathrm{i} - \mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\sqrt{\mathrm{i} + \mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\Bigg)\Bigg)\Bigg) \Bigg/$$

$$\Bigg(\left(\mathrm{Cos}\left[\frac{c}{2}\right] - \mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right] + \mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{1}{2}\,(c + d\,x)\right] + \mathrm{Sin}\left[\frac{1}{2}\,(c + d\,x)\right]\right)\Bigg)\Bigg)\Bigg]$$

$$\sqrt{-1 + \mathrm{Sin}[c]}\;\sqrt{\mathrm{i} + \mathrm{Tan}\left[\frac{d\,x}{2}\right]} + \sqrt{2}\;\mathrm{Log}\Bigg[\Bigg((2 - 2\,\mathrm{i})\;\mathrm{Cos}\left[\frac{d\,x}{2}\right]\left(\mathrm{Cos}\left[\frac{c}{2}\right] + \mathrm{i}\;\mathrm{Sin}\left[\frac{c}{2}\right]\right)$$

$$\Bigg(\mathrm{Sin}\left[\frac{c}{2}\right]\Bigg(\sqrt{2}\;\sqrt{1 + \mathrm{Sin}[c]} - \sqrt{2}\;\sqrt{1 + \mathrm{Sin}[c]}\;\mathrm{Tan}\left[\frac{d\,x}{2}\right] +$$

$$2\,\mathrm{i}\;\sqrt{\mathrm{i} - \mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\sqrt{\mathrm{i} + \mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\Bigg) + \mathrm{Cos}\left[\frac{c}{2}\right]\Bigg(\sqrt{2}\;\sqrt{1 + \mathrm{Sin}[c]} +$$

$$\sqrt{2}\;\sqrt{1 + \mathrm{Sin}[c]}\;\mathrm{Tan}\left[\frac{d\,x}{2}\right] + 2\,\mathrm{i}\;\sqrt{\mathrm{i} - \mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\sqrt{\mathrm{i} + \mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\Bigg)\Bigg)\Bigg) \Bigg/$$

$$\Bigg(\left(\mathrm{Cos}\left[\frac{c}{2}\right] - \mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right] + \mathrm{Sin}\left[\frac{c}{2}\right]\right)\Bigg(\mathrm{Cos}\left[\frac{1}{2}\,(c + d\,x)\right] -$$

$$\mathrm{Sin}\left[\frac{1}{2}\,(c + d\,x)\right]\Bigg)\Bigg)\Bigg]\;\sqrt{1 + \mathrm{Sin}[c]}\;\sqrt{\mathrm{i} + \mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\Bigg)\Bigg) -$$

$$\Big((1+i)\,\text{Cos}[d\,x]\,\text{Sec}[c+d\,x]\,\Big(\text{Cos}\Big[\frac{c}{2}\Big]-i\,\text{Sin}\Big[\frac{c}{2}\Big]\Big)\,\text{Sin}[3\,c]^2$$

$$(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])$$

$$\Big((1+i)\,\Big(\text{Cos}\Big[\frac{c}{2}\Big]-i\,\text{Sin}\Big[\frac{c}{2}\Big]\Big)\sqrt{i-\text{Tan}\Big[\frac{d\,x}{2}\Big]}+$$

$$\sqrt{2}\,\text{ArcTan}\Big[\frac{(-1)^{1/4}\,\Big(\text{Cos}\big[\frac{c}{2}\big]-i\,\text{Sin}\big[\frac{c}{2}\big]\Big)\sqrt{i+\text{Tan}\big[\frac{d\,x}{2}\big]}}{\sqrt{i-\text{Tan}\big[\frac{d\,x}{2}\big]}}\Big]\,\text{Sin}[c]\,\sqrt{i+\text{Tan}\Big[\frac{d\,x}{2}\Big]}+$$

$$i\,\sqrt{2}\,\text{ArcTan}\Big[\frac{\sqrt{-1+i}\,\Big(\text{Cos}\big[\frac{c}{2}\big]-i\,\text{Sin}\big[\frac{c}{2}\big]\Big)\sqrt{i+\text{Tan}\big[\frac{d\,x}{2}\big]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\big[\frac{d\,x}{2}\big]}}\Big]$$

$$\text{Sin}[c]\,\sqrt{i+\text{Tan}\Big[\frac{d\,x}{2}\Big]}\Big)\Big)\Big/\Big(\sqrt{i-\text{Tan}\Big[\frac{d\,x}{2}\Big]}$$

$$\Big(-\Big(\Big(\Big(\frac{1}{4}+\frac{i}{4}\Big)\,\text{Sec}\Big[\frac{d\,x}{2}\Big]^2\,\Big(\text{Cos}\Big[\frac{c}{2}\Big]-i\,\text{Sin}\Big[\frac{c}{2}\Big]\Big)\,\text{Sin}[3\,c]\,\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}$$

$$\Big((1+i)\,\Big(\text{Cos}\Big[\frac{c}{2}\Big]-i\,\text{Sin}\Big[\frac{c}{2}\Big]\Big)\sqrt{i-\text{Tan}\Big[\frac{d\,x}{2}\Big]}+\sqrt{2}\,\text{ArcTan}\Big[$$

$$\frac{(-1)^{1/4}\,\Big(\text{Cos}\big[\frac{c}{2}\big]-i\,\text{Sin}\big[\frac{c}{2}\big]\Big)\sqrt{i+\text{Tan}\big[\frac{d\,x}{2}\big]}}{\sqrt{i-\text{Tan}\big[\frac{d\,x}{2}\big]}}\Big]\,\text{Sin}[c]\,\sqrt{i+\text{Tan}\Big[\frac{d\,x}{2}\Big]}+$$

$$i\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]$$

$$\left.\left.\left.\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right)\right)\middle/\left(i-\text{Tan}\left[\frac{dx}{2}\right]\right)^{3/2}\right)-$$

$$\left(\left(\frac{1}{2}+\frac{i}{2}\right)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\text{Sin}[3c]\left(i\,\text{Cos}[dx]-\text{Sin}[dx]\right)\right.$$

$$\left((1+i)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}+\sqrt{2}\right.$$

$$\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]\text{Sin}[c]$$

$$\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}+i\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]$$

$$\left.\left.\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right)\right)\middle/\left(\sqrt{\text{Cos}[dx]+i\,\text{Sin}[dx]}\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}\right)-$$

$$\frac{1}{\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}(1+i)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\text{Sin}[3c]\sqrt{\text{Cos}[dx]+i\,\text{Sin}[dx]}$$

$$\left(-\frac{\left(\frac{1}{4}+\frac{i}{4}\right)\text{Sec}\left[\frac{dx}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}+\left(\text{ArcTan}\left[\right.\right.\right.$$

$$\left.\left.\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]\text{Sec}\left[\frac{dx}{2}\right]^2\text{Sin}[c]\right)\Big/\left(2\sqrt{2}\right.$$

$$\left.\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right)+\left(i\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]\right.$$

$$\left.\text{Sec}\left[\frac{dx}{2}\right]^2\text{Sin}[c]\right)\Big/\left(2\sqrt{2}\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right)+\left(i\sqrt{2}\,\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right.$$

$$\left(\frac{\sqrt{-1+i}\,\text{Sec}\left[\frac{dx}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}+\left(\sqrt{-1+i}\,\text{Sec}\left[\frac{dx}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\right.\right.\right.$$

$$\left.\left.\left.\left.i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right)\Big/\left(4\sqrt{-1-i}\left(i-\text{Tan}\left[\frac{dx}{2}\right]\right)^{3/2}\right)\right)\right)\Big/$$

$$\left(1-\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{dx}{2}\right]\right)}{i-\text{Tan}\left[\frac{dx}{2}\right]}\right)+\left(\sqrt{2}\,\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right.$$

$$\left(\frac{(-1)^{1/4}\text{Sec}\left[\frac{dx}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}+\left((-1)^{1/4}\text{Sec}\left[\frac{dx}{2}\right]^2\right.\right.$$

$$\left.\left.\left.\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\middle/\left(4\left(\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\middle/$$

$$\left.\left.\left.\left.\left(1+\frac{\text{i}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\right)\right)\left(a+\text{i}\,a\,\text{Tan}[c+d\,x]\right)^{5/2}$$

Problem 409: Result more than twice size of optimal antiderivative.

$$\int\sqrt{e\,\text{Sec}[c+d\,x]}\,\left(a+\text{i}\,a\,\text{Tan}[c+d\,x]\right)^{5/2}\,dx$$

Optimal (type 3, 411 leaves, 12 steps):

$$\frac{21\,\text{i}\,a^{5/2}\sqrt{e}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{4\sqrt{2}\,d}-$$

$$\frac{21\,\text{i}\,a^{5/2}\sqrt{e}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{4\sqrt{2}\,d}-\frac{1}{8\sqrt{2}\,d}21\,\text{i}\,a^{5/2}\sqrt{e}$$

$$\text{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\left(a+\text{i}\,a\,\text{Tan}[c+d\,x]\right)\right]+\frac{1}{8\sqrt{2}\,d}$$

$$21\,\text{i}\,a^{5/2}\sqrt{e}\,\text{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\left(a+\text{i}\,a\,\text{Tan}[c+d\,x]\right)\right]+$$

$$\frac{7\,\text{i}\,a^2\sqrt{e\,\text{Sec}[c+d\,x]}\,\sqrt{a+\text{i}\,a\,\text{Tan}[c+d\,x]}}{4\,d}+\frac{\text{i}\,a\sqrt{e\,\text{Sec}[c+d\,x]}\,\left(a+\text{i}\,a\,\text{Tan}[c+d\,x]\right)^{3/2}}{2\,d}$$

Result (type 3, 1521 leaves):

$$\left(\text{Cos}[c+d\,x]^3\sqrt{e\,\text{Sec}[c+d\,x]}\,\left(\text{Sec}[c+d\,x]\left(\frac{11}{4}\,\text{i}\,\text{Cos}[2\,c]+\frac{11}{4}\,\text{Sin}[2\,c]\right)+\right.\right.$$

$$\left.\text{Sec}[c+d\,x]^2\left(-\frac{1}{2}\,\text{i}\,\text{Cos}[3\,c+d\,x]-\frac{1}{2}\,\text{Sin}[3\,c+d\,x]\right)\right)$$

$$\left.\left(a+\text{i}\,a\,\text{Tan}[c+d\,x]\right)^{5/2}\right)\middle/\left(d\left(\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x]\right)^2\right)+$$

$$\left(\left(\frac{21}{4}+\frac{21\,\text{i}}{4}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.\left.\mathbb{i}\,\text{ArcTan}\left[\frac{\sqrt{-1+\mathbb{i}}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathbb{i}}\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\right.$$

$$\text{Cos}[c+d\,x]^2\,\sqrt{e\,\text{Sec}[c+d\,x]}\,\left(\text{Cos}\left[\frac{5\,c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{5\,c}{2}\right]\right)$$

$$\left(\frac{21}{8}\,\text{Cos}[2\,c]\,\sqrt{\text{Cos}[d\,x]+\mathbb{i}\,\text{Sin}[d\,x]}-\frac{21}{8}\,\mathbb{i}\,\text{Sin}[2\,c]\,\sqrt{\text{Cos}[d\,x]+\mathbb{i}\,\text{Sin}[d\,x]}\right)$$

$$\left.\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\,\left(a+\mathbb{i}\,a\,\text{Tan}[c+d\,x]\right)^{5/2}\right)\Big/$$

$$\left(d\,\left(\text{Cos}[d\,x]+\mathbb{i}\,\text{Sin}[d\,x]\right)^2\,\sqrt{2\,\mathbb{i}-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left(\left(\left(\frac{21}{16}+\frac{21\,\mathbb{i}}{16}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.\right.$$

$$\left.\mathbb{i}\,\text{ArcTan}\left[\frac{\sqrt{-1+\mathbb{i}}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathbb{i}}\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\text{Sec}\left[\frac{d\,x}{2}\right]^2\,\left(\text{Cos}\left[\frac{5\,c}{2}\right]-\right.$$

$$\left.\left.\mathbb{i}\,\text{Sin}\left[\frac{5\,c}{2}\right]\right)\sqrt{\text{Cos}[d\,x]+\mathbb{i}\,\text{Sin}[d\,x]}\right)\Big/\left(\sqrt{2\,\mathbb{i}-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\left(\frac{21}{8}+\frac{21\,\mathbb{i}}{8}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\mathbb{i}\,\text{ArcTan}\left[\right.\right.\right.$$

$$\left.\left.\frac{\sqrt{-1+i}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\,\left(\text{Cos}\left[\frac{5\,c}{2}\right]-i\,\text{Sin}\left[\frac{5\,c}{2}\right]\right)$$

$$\left.\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}+$$

$$\left(\left(\frac{21}{8}+\frac{21\,i}{8}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.i\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)$$

$$\left.\left(\text{Cos}\left[\frac{5\,c}{2}\right]-i\,\text{Sin}\left[\frac{5\,c}{2}\right]\right)\left(i\,\text{Cos}[d\,x]-\text{Sin}[d\,x]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\,\sqrt{2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\left(\frac{21}{4}+\frac{21\,i}{4}\right)\left(\text{Cos}\left[\frac{5\,c}{2}\right]-i\,\text{Sin}\left[\frac{5\,c}{2}\right]\right)\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\right.$$

$$\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\,\left(-\left(\left(i\left(\frac{\sqrt{-1+i}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.\right.\right.$$

$$\left(\sqrt{-1+i}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(4\sqrt{-1-i}\right.$$

$$\left.\left.\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right) \Big/ \left(1-\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)+$$

$$\left(\frac{(-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+\left((-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\right.\right.$$

$$\left.\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right) \Big/ \left(4\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\Bigg) \Big/$$

$$\left.\left.\left(1+\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right) \Big/ \left(\sqrt{2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg)\Bigg)$$

Problem 410: Result more than twice size of optimal antiderivative.

$$\int\frac{\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^{5/2}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\,dx$$

Optimal (type 3, 563 leaves, 13 steps):

$$\frac{5\,i\,a^{7/2}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]\,\text{Sec}[c+d\,x]}{\sqrt{2}\,d\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}-$$

$$\frac{5\,i\,a^{7/2}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]\,\text{Sec}[c+d\,x]}{\sqrt{2}\,d\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}-$$

$$\left(5\,i\,a^{7/2}\,\text{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,\left(a-i\,a\,\text{Tan}[c+d\,x]\right)\right]\right.$$
$$\left.\text{Sec}[c+d\,x]\right)\Big/\left(2\,\sqrt{2}\,d\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)+$$

$$\left(5\,i\,a^{7/2}\,\text{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,\left(a-i\,a\,\text{Tan}[c+d\,x]\right)\right]\right.$$
$$\left.\text{Sec}[c+d\,x]\right)\Big/\left(2\,\sqrt{2}\,d\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)-$$

$$\frac{10\,i\,a^2\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{d\,\sqrt{e\,\text{Sec}[c+d\,x]}}+\frac{i\,a\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^{3/2}}{d\,\sqrt{e\,\text{Sec}[c+d\,x]}}$$

Result (type 3, 5863 leaves):

$$\left(\text{Cos}[c+d\,x]^2\,\left(-8\,i\,\text{Cos}[2\,c]-8\,\text{Sin}[2\,c]+\text{Sec}[c+d\,x]\,\left(-i\,\text{Cos}[3\,c+d\,x]-\text{Sin}[3\,c+d\,x]\right)\right)\right.$$
$$\left.\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^{5/2}\right)\Big/\left(d\,\sqrt{e\,\text{Sec}[c+d\,x]}\,\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^2\right)-$$

$$\frac{1}{2\,d\,\sqrt{e\,\text{Sec}[c+d\,x]}\,\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^{5/2}}\,5\,\text{Cos}[c+d\,x]^2$$

$$\left(\frac{1}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+2\,\text{Cos}[2\,c]\right)\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\text{Sin}[c]\,\sqrt{\frac{i-\text{Tan}\left[\frac{d\,x}{2}\right]}{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}\right.$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]\,\left(\left(2-2\,i\right)\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}-\sqrt{2}\,\text{Log}\left[\left(1+i\right)\,\left(2-2\,i\,\text{Cot}\left[\frac{c}{2}\right]\right)\,\text{Sin}\left[\frac{c}{2}\right]^2\right.\right.\right.$$

$$\left(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]-2\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}+\text{Cot}\left[\frac{c}{2}\right]\,\left(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\right.\right.$$

$$\left.\left.\left.\left.\frac{d\,x}{2}\right]+2\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(-\text{Sin}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+\text{Cos}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\Big)\Big)\Big]$$

$$\sqrt{-1+\text{Sin}[c]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\text{Log}\Big[-\Big(\Big(\left(2-2\,\mathbb{i}\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)$$

$$\Big(\text{Sin}\left[\frac{c}{2}\right]\Big(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}-\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+$$

$$2\,\mathbb{i}\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Big)+\text{Cos}\left[\frac{c}{2}\right]\Big(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}+$$

$$\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathbb{i}\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Big)\Big)\Big)\Big/$$

$$\Big(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\Big(\text{Cos}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+$$

$$\text{Sin}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\Big)\Big)\Big)\Big]\,\sqrt{1+\text{Sin}[c]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Big)-$$

$$\text{Sin}\left[\frac{c}{2}\right]\Big(\left(2+2\,\mathbb{i}\right)\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\text{Log}\Big[\Big(\left(1+\mathbb{i}\right)\left(2-2\,\mathbb{i}\,\text{Cot}\left[\frac{c}{2}\right]\right)\text{Sin}\left[\frac{c}{2}\right]^2$$

$$\Big(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]-2\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}$$

$$\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+\text{Cot}\left[\frac{c}{2}\right]\Big(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\Big[$$

$$\frac{d\,x}{2}\Big]+2\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Big)\Big)\Big)\Big/\Big(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(-\text{Sin}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+\text{Cos}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\Big)\Big)\Big]$$

$$\sqrt{-1+\text{Sin}[c]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\text{Log}\Big[-\Big(\Big(\left(2-2\,\mathbb{i}\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)$$

$$\Big(\text{Sin}\left[\frac{c}{2}\right]\Big(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}-\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+$$

$$2\,i\,\sqrt{i-\tan\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\tan\left[\frac{d\,x}{2}\right]}\Bigg)+\cos\left[\frac{c}{2}\right]\Bigg(\sqrt{2}\,\sqrt{1+\sin[c]}+$$

$$\sqrt{2}\,\sqrt{1+\sin[c]}\,\tan\left[\frac{d\,x}{2}\right]+2\,i\,\sqrt{i-\tan\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\tan\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\left(\left(\cos\left[\frac{c}{2}\right]-\sin\left[\frac{c}{2}\right]\right)\left(\cos\left[\frac{c}{2}\right]+\sin\left[\frac{c}{2}\right]\right)\left(\cos\left[\frac{c}{2}\right]\left(-1+\tan\left[\frac{d\,x}{2}\right]\right)+\right.\right.$$

$$\left.\left.\sin\left[\frac{c}{2}\right]\left(1+\tan\left[\frac{d\,x}{2}\right]\right)\right)\right)\Bigg]\,\sqrt{1+\sin[c]}\,\sqrt{i+\tan\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)-$$

$$\Bigg((1+i)\,\cos[3\,c]^2\cos[d\,x]\,\sec[c+d\,x]\left(\cos\left[\frac{c}{2}\right]-i\,\sin\left[\frac{c}{2}\right]\right)$$

$$(\cos[d\,x]+i\,\sin[d\,x])$$

$$\Bigg((1+i)\left(\cos\left[\frac{c}{2}\right]-i\,\sin\left[\frac{c}{2}\right]\right)\sqrt{i-\tan\left[\frac{d\,x}{2}\right]}+$$

$$\sqrt{2}\,\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\cos\left[\frac{c}{2}\right]-i\,\sin\left[\frac{c}{2}\right]\right)\sqrt{i+\tan\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\tan\left[\frac{d\,x}{2}\right]}}\right]\sin[c]\,\sqrt{i+\tan\left[\frac{d\,x}{2}\right]}+$$

$$i\,\sqrt{2}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+i}\left(\cos\left[\frac{c}{2}\right]-i\,\sin\left[\frac{c}{2}\right]\right)\sqrt{i+\tan\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\tan\left[\frac{d\,x}{2}\right]}}\right]$$

$$\sin[c]\,\sqrt{i+\tan\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)\Bigg/\Bigg(\sqrt{i-\tan\left[\frac{d\,x}{2}\right]}$$

$$\Bigg(-\Bigg(\Bigg(\left(\frac{1}{4}+\frac{i}{4}\right)\cos[3\,c]\,\sec\left[\frac{d\,x}{2}\right]^2\left(\cos\left[\frac{c}{2}\right]-i\,\sin\left[\frac{c}{2}\right]\right)\sqrt{\cos[d\,x]+i\,\sin[d\,x]}$$

$$\left((1+i)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\text{ArcTan}\left[\right.\right.$$

$$\left.\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$i\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\left.\text{Sin}[c]\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Big/\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)-$$

$$\left(\left(\frac{1}{2}+\frac{i}{2}\right)\text{Cos}[3\,c]\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\left(i\,\text{Cos}[d\,x]-\text{Sin}[d\,x]\right)\right.$$

$$\left((1+i)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\right.$$

$$\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\text{Sin}[c]$$

$$\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}+i\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\text{Sin}[c]\,\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Big/\left(\sqrt{\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x]}\,\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)-$$

$$\frac{1}{\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\left(1+\text{i}\right)\text{Cos}[3\,c]\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x]}$$

$$\left(-\frac{\left(\frac{1}{4}+\frac{\text{i}}{4}\right)\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}+\left(\text{ArcTan}\left[\right.\right.\right.$$

$$\left.\left.\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\text{Sec}\left[\frac{d\,x}{2}\right]^2\text{Sin}[c]\right)\Big/\left(2\sqrt{2}\right.$$

$$\left.\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\left(\text{i}\,\text{ArcTan}\left[\frac{\sqrt{-1+\text{i}}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\text{i}}\,\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right.$$

$$\left.\text{Sec}\left[\frac{d\,x}{2}\right]^2\text{Sin}[c]\right)\Big/\left(2\sqrt{2}\,\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\text{i}\sqrt{2}\,\text{Sin}[c]\,\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\left(\frac{\sqrt{-1+\text{i}}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-\text{i}}\,\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.$$

$$\left(\sqrt{-1+\text{i}}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(4\sqrt{-1-\text{i}}\right.$$

$$\left.\left.\left.\left(\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Big/\left(1-\frac{\text{i}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\sqrt{2}\,\text{Sin}[c]\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\,\left(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.$$

$$\left((-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(4\right.$$

$$\left.\left.\left.\left.\left.\left(\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\Big/\left(1+\frac{\mathbb{i}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\right)\right)$$

$$(a+\mathbb{i}\,a\,\text{Tan}[c+d\,x])^{5/2}+\frac{1}{2\,d\,\sqrt{e\,\text{Sec}[c+d\,x]}\,(\text{Cos}[d\,x]+\mathbb{i}\,\text{Sin}[d\,x])^{5/2}}$$

5

$\mathbb{i}$

Cos[

c +

d

x]^2

$$\left(\frac{1}{\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\text{Cos}[c]\,(-1+2\,\text{Cos}[2\,c])\right.$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)$$

$$\sqrt{\text{Cos}[d\,x]+\mathbb{i}\,\text{Sin}[d\,x]}$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]\left((-2+2\,\mathbb{i})\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}+\right.\right.$$

$$\sqrt{2}\,\text{Log}\left[\left((2+2\,\mathbb{i})\,\text{Cos}\left[\frac{d\,x}{2}\right]\left(1-\mathbb{i}\,\text{Cot}\left[\frac{c}{2}\right]\right)\text{Sin}\left[\frac{c}{2}\right]^2\left(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\right.\right.\right.$$

$$\left.\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]-2\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\text{Cot}\left[\frac{c}{2}\right]$$

$$\left(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)\Bigg)\Bigg/\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left(\mathrm{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]+\mathrm{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right)\right)\Bigg]\sqrt{-1+\mathrm{Sin}[c]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}-$$

$$\sqrt{2}\,\mathrm{Log}\Bigg[\Bigg((2-2\,\mathrm{i})\,\mathrm{Cos}\left[\frac{d\,x}{2}\right]\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\Bigg(\mathrm{Sin}\left[\frac{c}{2}\right]\Bigg(\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}-$$

$$\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+$$

$$\mathrm{Cos}\left[\frac{c}{2}\right]\Bigg(\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}+\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}$$

$$\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)\Bigg)\Bigg/\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left(\mathrm{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]-\mathrm{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right)\right)\Bigg]\sqrt{1+\mathrm{Sin}[c]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+$$

$$\mathrm{Sin}\left[\frac{c}{2}\right]\Bigg((2+2\,\mathrm{i})\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\mathrm{Log}\Bigg[\Bigg((2+2\,\mathrm{i})\,\mathrm{Cos}\left[\frac{d\,x}{2}\right]\left(1-\mathrm{i}\,\mathrm{Cot}\left[\frac{c}{2}\right]\right)$$

$$\mathrm{Sin}\left[\frac{c}{2}\right]^2\Bigg(\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]-$$

$$2\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\mathrm{Cot}\left[\frac{c}{2}\right]\Bigg(-\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}+$$

$$\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]+\mathrm{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right)\right)\Bigg]$$

$$\sqrt{-1+\mathrm{Sin}[c]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\mathrm{Log}\Bigg[\Bigg((2-2\,\mathrm{i})\,\mathrm{Cos}\left[\frac{d\,x}{2}\right]\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left(\text{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}-\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,i\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\text{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,i\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\right)\Big]\,\sqrt{1+\text{Sin}[c]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)-$$

$$\Bigg((1+i)\,\text{Cos}[d\,x]\,\text{Sec}[c+d\,x]\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\text{Sin}[3\,c]^2$$

$$(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])$$

$$\Bigg((1+i)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$\sqrt{2}\,\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$i\,\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)\Big/\left(\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left(-\left(\left(\left(\frac{1}{4}+\frac{i}{4}\right) \mathrm{Sec}\left[\frac{d x}{2}\right]^2 \left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right) \mathrm{Sin}[3 c] \sqrt{\mathrm{Cos}[d x]+i\,\mathrm{Sin}[d x]}\right.\right.\right.$$

$$\left((1+i) \left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i-\mathrm{Tan}\left[\frac{d x}{2}\right]}+\sqrt{2}\,\mathrm{ArcTan}\left[\right.\right.$$

$$\left.\frac{(-1)^{1/4} \left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i+\mathrm{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{i-\mathrm{Tan}\left[\frac{d x}{2}\right]}}\right] \mathrm{Sin}[c] \sqrt{i+\mathrm{Tan}\left[\frac{d x}{2}\right]}+$$

$$i \sqrt{2}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+i} \left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i+\mathrm{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{-1-i} \sqrt{i-\mathrm{Tan}\left[\frac{d x}{2}\right]}}\right]$$

$$\left.\left.\left.\mathrm{Sin}[c] \sqrt{i+\mathrm{Tan}\left[\frac{d x}{2}\right]}\right)\right) \Big/ \left(i-\mathrm{Tan}\left[\frac{d x}{2}\right]\right)^{3/2}\right)-$$

$$\left(\left(\frac{1}{2}+\frac{i}{2}\right) \left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right) \mathrm{Sin}[3 c] \left(i\,\mathrm{Cos}[d x]-\mathrm{Sin}[d x]\right)\right.$$

$$\left((1+i) \left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i-\mathrm{Tan}\left[\frac{d x}{2}\right]}+\sqrt{2}\right.$$

$$\mathrm{ArcTan}\left[\frac{(-1)^{1/4} \left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i+\mathrm{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{i-\mathrm{Tan}\left[\frac{d x}{2}\right]}}\right] \mathrm{Sin}[c]$$

$$\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\mathrm{i}\,\sqrt{2}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\mathrm{Sin}[c]\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Big/\left(\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)-$$

$$\frac{1}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\,(1+\mathrm{i})\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\,\mathrm{Sin}[3\,c]\,\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}$$

$$\left(-\frac{\left(\frac{1}{4}+\frac{\mathrm{i}}{4}\right)\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+\left(\mathrm{ArcTan}\left[\right.\right.\right.$$

$$\left.\left.\frac{(-1)^{1/4}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\,\mathrm{Sin}[c]\right)\Big/\left(2\,\sqrt{2}\right.$$

$$\left.\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+\left(\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right.$$

$$\left.\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\,\mathrm{Sin}[c]\right)\Big/\left(2\,\sqrt{2}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+\left(\mathrm{i}\,\sqrt{2}\,\mathrm{Sin}[c]\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left(\frac{\sqrt{-1+\mathrm{i}}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\,\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+\left(\sqrt{-1+\mathrm{i}}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\right.\right.\right.$$

$$\left.\left.\left.\left.\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(4\sqrt{-1-\mathrm{i}}\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Big/$$

$$\left(1-\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+\left(\sqrt{2}\,\mathrm{Sin}[c]\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left(\frac{(-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+\left((-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\right.\right.$$

$$\left.\left.\left.\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(4\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Big/$$

$$\left.\left.\left.\left.\left(1+\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\right)\right)\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^{5/2}$$

Problem 411: Result more than twice size of optimal antiderivative.

$$\int\frac{\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^{5/2}}{\left(e\,\mathrm{Sec}[c+d\,x]\right)^{3/2}}\,dx$$

Optimal (type 3, 362 leaves, 11 steps):

$$-\frac{\mathrm{i}\sqrt{2}\,a^{5/2}\,\mathrm{ArcTan}\left[1-\frac{\sqrt{2}\sqrt{e}\sqrt{a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]}{d\,e^{3/2}}+\frac{\mathrm{i}\sqrt{2}\,a^{5/2}\,\mathrm{ArcTan}\left[1+\frac{\sqrt{2}\sqrt{e}\sqrt{a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]}{d\,e^{3/2}}+$$

$$\frac{1}{\sqrt{2}\,d\,e^{3/2}}\mathrm{i}\,a^{5/2}\,\mathrm{Log}\left[a-\frac{\sqrt{2}\sqrt{a}\sqrt{e}\sqrt{a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)\right]-$$

$$\frac{1}{\sqrt{2}\,d\,e^{3/2}}\mathrm{i}\,a^{5/2}\,\mathrm{Log}\left[a+\frac{\sqrt{2}\sqrt{a}\sqrt{e}\sqrt{a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)\right]-$$

$$\frac{4\,\mathrm{i}\,a\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^{3/2}}{3\,d\left(e\,\mathrm{Sec}[c+d\,x]\right)^{3/2}}$$

Result (type 3, 1571 leaves):

$$\left(\text{Cos}[c+d\,x]\left(\text{Cos}[d\,x]\left(-\frac{4}{3}\,\text{i}\,\text{Cos}[c]-\frac{4\,\text{Sin}[c]}{3}\right)+\left(\frac{4\,\text{Cos}[c]}{3}-\frac{4}{3}\,\text{i}\,\text{Sin}[c]\right)\text{Sin}[d\,x]\right)\right.$$
$$\left.(a+\text{i}\,a\,\text{Tan}[c+d\,x])^{5/2}\right)\Big/\left(d\,(e\,\text{Sec}[c+d\,x])^{3/2}\,(\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x])^2\right)-$$

$$\left((1+\text{i})\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.\text{i}\,\text{ArcTan}\left[\frac{\sqrt{-1+\text{i}}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\text{i}}\,\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)(\text{Cos}[2\,c]-\text{i}\,\text{Sin}[2\,c])$$
$$\left(-\text{Cos}[2\,c]\,\sqrt{\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x]}+\text{i}\,\text{Sin}[2\,c]\,\sqrt{\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x]}\right)$$

$$\left.\sqrt{2\,\text{Cos}[d\,x]+2\,\text{i}\,\text{Sin}[d\,x]}\,\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\,(a+\text{i}\,a\,\text{Tan}[c+d\,x])^{5/2}\right)\Big/$$

$$\left(d\,(e\,\text{Sec}[c+d\,x])^{3/2}\,(\text{Cos}[d\,x]+\text{i}\,\text{Sin}[d\,x])^{5/2}\,\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left(-\left(\left(\left(\frac{1}{4}+\frac{\text{i}}{4}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.\right.\right.$$

$$\left.\text{i}\,\text{ArcTan}\left[\frac{\sqrt{-1+\text{i}}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\text{i}}\,\sqrt{\text{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)$$

$$\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)(\text{Cos}[2\,c]-\text{i}\,\text{Sin}[2\,c])$$

$$\left.\left.\sqrt{2\,\text{Cos}[d\,x]+2\,i\,\text{Sin}[d\,x]}\right)\middle/\left(\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)-$$

$$\left(\left(\frac{1}{4}+\frac{i}{4}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-i\,\text{ArcTan}\left[\right.\right.\right.$$

$$\left.\left.\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left.(\text{Cos}[2\,c]-i\,\text{Sin}[2\,c])\,\sqrt{2\,\text{Cos}[d\,x]+2\,i\,\text{Sin}[d\,x]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}-\left(\left(\frac{1}{2}+\frac{i}{2}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.i\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left.(\text{Cos}[2\,c]-i\,\text{Sin}[2\,c])\,(2\,i\,\text{Cos}[d\,x]-2\,\text{Sin}[d\,x])\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(\sqrt{2\,\text{Cos}[d\,x]+2\,i\,\text{Sin}[d\,x]}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)-\frac{1}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}$$

$$(1+i)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)(\text{Cos}[2\,c]-i\,\text{Sin}[2\,c])\,\sqrt{2\,\text{Cos}[d\,x]+2\,i\,\text{Sin}[d\,x]}$$

$$\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\Bigg(-\Bigg(\Bigg(\mathrm{i}\;\Bigg(\frac{\sqrt{-1+\mathrm{i}}\;\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\,\sqrt{-1-\mathrm{i}}\;\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+$$

$$\Bigg(\sqrt{-1+\mathrm{i}}\;\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg/\Bigg(4\,\sqrt{-1-\mathrm{i}}$$

$$\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\Bigg)\Bigg)\Bigg)\Bigg/\left(1-\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\Bigg(\frac{(-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+$$

$$\frac{(-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{4\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}}\Bigg)\Bigg/$$

$$\left(1+\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg)\Bigg)\Bigg)$$

Problem 416: Result more than twice size of optimal antiderivative.

$$\int\frac{(e\,\mathrm{Sec}[c+d\,x])^{5/2}}{\sqrt{a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]}}\,dx$$

Optimal (type 3, 369 leaves, 11 steps):

$$\frac{i\, e^{5/2}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{\sqrt{2}\,\sqrt{a}\,d}-\frac{i\, e^{5/2}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{\sqrt{2}\,\sqrt{a}\,d}-\frac{1}{2\sqrt{2}\,\sqrt{a}\,d}$$

$$i\, e^{5/2}\,\text{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)\right]+$$

$$\frac{1}{2\sqrt{2}\,\sqrt{a}\,d}\,i\, e^{5/2}\,\text{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)\right]-$$

$$\frac{i\, e^{2}\,\sqrt{e\,\text{Sec}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{a\,d}$$

Result (type 3, 1531 leaves):

$$\left(\text{Cos}[c+d\,x]\,\left(e\,\text{Sec}[c+d\,x]\right)^{5/2}\left(-i\,\text{Cos}[c]\,\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}+\text{Sin}[c]\,\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\right)\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\right)\Big/\left(d\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)+$$

$$\left((1+i)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.\left.i\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\right.$$

$$\text{Cos}[c+d\,x]\,\left(e\,\text{Sec}[c+d\,x]\right)^{5/2}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}[c]+i\,\text{Sin}[c]\right)$$

$$\left(\frac{1}{2}\,\text{Cos}[c]\,\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}+\frac{1}{2}\,i\,\text{Sin}[c]\,\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\right)$$

$$\left.\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(d\,\sqrt{2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left(\left(\left(\frac{1}{4}+\frac{i}{4}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-i\,\text{ArcTan}\left[\right.\right.\right.\right.$$

$$\left.\left.\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left.(\mathrm{Cos}[c]+\mathrm{i}\,\mathrm{Sin}[c])\,\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}\right)\Big/\left(\sqrt{2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\left(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2$$

$$\left.\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\,(\mathrm{Cos}[c]+\mathrm{i}\,\mathrm{Sin}[c])\,\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}+\left(\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\left(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left.(\mathrm{Cos}[c]+\mathrm{i}\,\mathrm{Sin}[c])\,(\mathrm{i}\,\mathrm{Cos}[d\,x]-\mathrm{Sin}[d\,x])\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(\sqrt{\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]}\,\sqrt{2\,\mathrm{i}-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\Bigg((1+\mathrm{i})\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)(\text{Cos}[c]+\mathrm{i}\,\text{Sin}[c])\,\sqrt{\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]}$$

$$\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\,\Bigg(-\Bigg(\Bigg(\mathrm{i}\,\Bigg(\frac{\sqrt{-1+\mathrm{i}}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\,\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}+$$

$$\left(\sqrt{-1+\mathrm{i}}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\Bigg(4\,\sqrt{-1-\mathrm{i}}$$

$$\left(\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\Bigg)\Bigg)\Bigg)\Bigg/\left(1-\frac{\mathrm{i}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg)+$$

$$\Bigg(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\Bigg((-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Big/\left(4\left(\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\Bigg)\Big/$$

$$\left(1+\frac{\mathrm{i}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg)\Bigg)\Big/$$

$$\left(\sqrt{2\,\mathrm{i}-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg)\,\sqrt{a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]}\Bigg)$$

Problem 417: Result more than twice size of optimal antiderivative.

$$\int \frac{(e\,\text{Sec}[c+d\,x])^{3/2}}{\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}\,dx$$

Optimal (type 3, 483 leaves, 11 steps):

$$-\frac{i\sqrt{2}\,\sqrt{a}\,e^{3/2}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]\text{Sec}[c+d\,x]}{d\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}+\frac{i\sqrt{2}\,\sqrt{a}\,e^{3/2}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]\text{Sec}[c+d\,x]}{d\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}+\left(i\sqrt{a}\,e^{3/2}\,\text{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,(a-i\,a\,\text{Tan}[c+d\,x])\right]\text{Sec}[c+d\,x]\right)\Big/\left(\sqrt{2}\,d\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)-\left(i\sqrt{a}\,e^{3/2}\,\text{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,(a-i\,a\,\text{Tan}[c+d\,x])\right]\text{Sec}[c+d\,x]\right)\Big/\left(\sqrt{2}\,d\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)$$

Result (type 3, 1683 leaves):

$$\left((1+i)\left(-i\,\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]+\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\text{Cos}[c+d\,x]\,(e\,\text{Sec}[c+d\,x])^{3/2}\left(\text{Cos}\left[\frac{c}{2}\right]+i\,\text{Sin}\left[\frac{c}{2}\right]\right)(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])\left(\text{Cos}[d\,x]\,\text{Sec}[c+d\,x]\,\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}-i\,\text{Sec}[c+d\,x]\,\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\,\text{Sin}[d\,x]\right)\sqrt{2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(d\left(-i+\text{Tan}\left[\frac{dx}{2}\right]\right)\left(\left(\left(\frac{1}{4}+\frac{i}{4}\right)\left(-i\,\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]+\text{ArcTan}\left[\right.\right.\right.\right.\right.$$

$$\left.\left.\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]\right)\text{Sec}\left[\frac{dx}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]+i\,\text{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left.\sqrt{\text{Cos}[dx]+i\,\text{Sin}[dx]}\sqrt{2i-2\,\text{Tan}\left[\frac{dx}{2}\right]}\right)\Big/\left(\left(-i+\text{Tan}\left[\frac{dx}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right)-$$

$$\left(\left(\frac{1}{2}+\frac{i}{2}\right)\left(-i\,\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]+\text{ArcTan}\left[\right.\right.\right.$$

$$\left.\left.\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]\right)\text{Sec}\left[\frac{dx}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]+i\,\text{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left.\sqrt{\text{Cos}[dx]+i\,\text{Sin}[dx]}\sqrt{2i-2\,\text{Tan}\left[\frac{dx}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}\right)\Big/\left(-i+\text{Tan}\left[\frac{dx}{2}\right]\right)^2-$$

$$\left(\left(\frac{1}{2}+\frac{i}{2}\right)\left(-i\,\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]+\text{ArcTan}\left[\right.\right.\right.$$

$$\left.\left.\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{dx}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\text{Tan}\left[\frac{dx}{2}\right]}}\right]\right)\text{Sec}\left[\frac{dx}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]+i\,\text{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left.\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(\sqrt{2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\,\left(-i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)+$$

$$\left(\left(\frac{1}{2}+\frac{i}{2}\right)\left(-i\,\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]+\right.\right.$$

$$\left.\text{ArcTan}\left[\frac{\sqrt{-1+i}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)$$

$$\left.\left(\text{Cos}\left[\frac{c}{2}\right]+i\,\text{Sin}\left[\frac{c}{2}\right]\right)\left(i\,\text{Cos}[d\,x]-\text{Sin}[d\,x]\right)\sqrt{2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\,\left(-i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)+\frac{1}{-i+\text{Tan}\left[\frac{d\,x}{2}\right]}$$

$$(1+i)\left(\text{Cos}\left[\frac{c}{2}\right]+i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\,\sqrt{2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}$$

$$\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\left(\left(\frac{\sqrt{-1+i}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.$$

$$\left.\frac{\sqrt{-1+i}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{4\sqrt{-1-i}\,\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}}\right)\Big/\left(1-\right.$$

$$\left.\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)-\left(i\left(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.$$

$$\left.\left.\frac{(-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{4\left(i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}}\right)\right)\Bigg/$$

$$\left.\left(1+\frac{i\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}\Bigg)$$

Problem 423: Result more than twice size of optimal antiderivative.

$$\int\frac{(e\,\mathrm{Sec}[c+d\,x])^{7/2}}{(a+i\,a\,\mathrm{Tan}[c+d\,x])^{3/2}}\,dx$$

Optimal (type 3, 529 leaves, 13 steps):

$$-\frac{i\,e^2\,(e\,\mathrm{Sec}[c+d\,x])^{3/2}}{a\,d\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}-\frac{3\,i\,e^{7/2}\,\mathrm{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]\mathrm{Sec}[c+d\,x]}{\sqrt{2}\,\sqrt{a}\,d\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}+$$

$$\frac{3\,i\,e^{7/2}\,\mathrm{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]\mathrm{Sec}[c+d\,x]}{\sqrt{2}\,\sqrt{a}\,d\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}+$$

$$\left(3\,i\,e^{7/2}\,\mathrm{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\,(a-i\,a\,\mathrm{Tan}[c+d\,x])\right]\right.$$

$$\left.\mathrm{Sec}[c+d\,x]\right)\Big/\left(2\,\sqrt{2}\,\sqrt{a}\,d\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}\right)-$$

$$\left(3\,i\,e^{7/2}\,\mathrm{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\,(a-i\,a\,\mathrm{Tan}[c+d\,x])\right]\right.$$

$$\left.\mathrm{Sec}[c+d\,x]\right)\Big/\left(2\,\sqrt{2}\,\sqrt{a}\,d\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}\right)$$

Result (type 3, 5841 leaves):

$$\left(\mathrm{Cos}[c+d\,x]\,(e\,\mathrm{Sec}[c+d\,x])^{7/2}\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^{3/2}\right.$$

$$\left.\left(-i\,\mathrm{Cos}[c-d\,x]\,\sqrt{\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]}+\sqrt{\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]}\,\mathrm{Sin}[c-d\,x]\right)\right)\Big/$$

$$\left(d\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^{3/2}\right)+\frac{1}{2\,d\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^{3/2}}$$

$$3\,\mathrm{Cos}[c+d\,x]^2\,(e\,\mathrm{Sec}[c+d\,x])^{7/2}\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^{3/2}$$

$$\left(-\frac{1}{\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}}\left(\frac{1}{2}+\frac{i}{2}\right)\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\text{Sin}[c]\sqrt{\frac{i-\text{Tan}\left[\frac{d x}{2}\right]}{i+\text{Tan}\left[\frac{d x}{2}\right]}}\right.$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]\left((2-2 i)\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}-\sqrt{2}\,\text{Log}\left[\left((1+i)\left(2-2 i\,\text{Cot}\left[\frac{c}{2}\right]\right)\text{Sin}\left[\frac{c}{2}\right]^2\right.\right.\right.\right.$$

$$\left(\sqrt{2}\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d x}{2}\right]-2\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}\right.$$

$$\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}+\text{Cot}\left[\frac{c}{2}\right]\left(-\sqrt{2}\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\right.\right.$$

$$\left.\left.\left.\left.\frac{d x}{2}\right]+2\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}\right)\right)\right)\Big/\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left.\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(-\text{Sin}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d x}{2}\right]\right)+\text{Cos}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d x}{2}\right]\right)\right)\right)\right)\right]$$

$$\sqrt{-1+\text{Sin}[c]}\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}+\sqrt{2}\,\text{Log}\left[-\left(\left((2-2 i)\left(\text{Cos}\left[\frac{c}{2}\right]+i\,\text{Sin}\left[\frac{c}{2}\right]\right)\right.\right.\right.$$

$$\left(\text{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\sqrt{1+\text{Sin}[c]}-\sqrt{2}\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d x}{2}\right]+\right.\right.$$

$$\left.2 i\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}\right)+\text{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\sqrt{1+\text{Sin}[c]}+\right.$$

$$\left.\left.\left.\sqrt{2}\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d x}{2}\right]+2 i\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}\right)\right)\right)\Big/$$

$$\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d x}{2}\right]\right)+\right.\right.$$

$$\left.\left.\left.\left.\text{Sin}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d x}{2}\right]\right)\right)\right)\right)\right]\sqrt{1+\text{Sin}[c]}\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}\right)-$$

$$\text{Sin}\left[\frac{c}{2}\right]\left((2+2 i)\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}+\sqrt{2}\,\text{Log}\left[\left((1+i)\left(2-2 i\,\text{Cot}\left[\frac{c}{2}\right]\right)\text{Sin}\left[\frac{c}{2}\right]^2\right.\right.\right.$$

$$\left(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]-2\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+\text{Cot}\left[\frac{c}{2}\right]\left(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\right.\right.$$

$$\left.\left.\left.\left.\frac{d\,x}{2}\right]+2\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left.\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(-\text{Sin}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+\text{Cos}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\right]$$

$$\sqrt{-1+\text{Sin}[c]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\text{Log}\left[-\left(\left(\left(2-2\,\mathbb{i}\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\right.\right.\right.$$

$$\left(\text{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}-\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+\right.\right.$$

$$\left.2\,\mathbb{i}\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\text{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}+\right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathbb{i}\,\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+\right.\right.$$

$$\left.\left.\left.\left.\text{Sin}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\right)\right]\sqrt{1+\text{Sin}[c]}\,\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)-$$

$$\left(\left(1+\mathbb{i}\right)\text{Cos}[c]^2\,\text{Cos}[d\,x]\,\text{Sec}[c+d\,x]\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}[d\,x]+\mathbb{i}\,\text{Sin}[d\,x]\right)\right.$$

$$\left(\left(1+\mathbb{i}\right)\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}+\right.$$

$$\sqrt{2}\, \text{ArcTan}\left[\frac{(-1)^{1/4} \left(\text{Cos}\left[\frac{c}{2}\right] - i\, \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i + \text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{i - \text{Tan}\left[\frac{d x}{2}\right]}}\right] \text{Sin}[c] \sqrt{i + \text{Tan}\left[\frac{d x}{2}\right]} +$$

$$i \sqrt{2}\, \text{ArcTan}\left[\frac{\sqrt{-1+i} \left(\text{Cos}\left[\frac{c}{2}\right] - i\, \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i + \text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{-1-i} \sqrt{i - \text{Tan}\left[\frac{d x}{2}\right]}}\right]$$

$$\left.\left.\text{Sin}[c] \sqrt{i + \text{Tan}\left[\frac{d x}{2}\right]}\right)\right) \Big/ \left(\sqrt{i - \text{Tan}\left[\frac{d x}{2}\right]}\right.$$

$$\left(-\left(\left(\left(\frac{1}{4} + \frac{i}{4}\right) \text{Cos}[c]\, \text{Sec}\left[\frac{d x}{2}\right]^2 \left(\text{Cos}\left[\frac{c}{2}\right] - i\, \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{\text{Cos}[d x] + i\, \text{Sin}[d x]}\right.\right.\right.$$

$$\left((1+i) \left(\text{Cos}\left[\frac{c}{2}\right] - i\, \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i - \text{Tan}\left[\frac{d x}{2}\right]} + \sqrt{2}\, \text{ArcTan}\right[$$

$$\left.\frac{(-1)^{1/4} \left(\text{Cos}\left[\frac{c}{2}\right] - i\, \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i + \text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{i - \text{Tan}\left[\frac{d x}{2}\right]}}\right] \text{Sin}[c] \sqrt{i + \text{Tan}\left[\frac{d x}{2}\right]} +$$

$$i \sqrt{2}\, \text{ArcTan}\left[\frac{\sqrt{-1+i} \left(\text{Cos}\left[\frac{c}{2}\right] - i\, \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i + \text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{-1-i} \sqrt{i - \text{Tan}\left[\frac{d x}{2}\right]}}\right]$$

$$\left.\left.\left.\text{Sin}[c] \sqrt{i + \text{Tan}\left[\frac{d x}{2}\right]}\right)\right) \Big/ \left(i - \text{Tan}\left[\frac{d x}{2}\right]\right)^{3/2}\right) -$$

$$\left(\left(\frac{1}{2}+\frac{i}{2}\right) \text{Cos}[c] \left(\text{Cos}\left[\frac{c}{2}\right]-i \text{Sin}\left[\frac{c}{2}\right]\right) (i \text{Cos}[d x]-\text{Sin}[d x])\right.$$

$$\left((1+i) \left(\text{Cos}\left[\frac{c}{2}\right]-i \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}+\sqrt{2}\right.$$

$$\text{ArcTan}\left[\frac{(-1)^{1/4} \left(\text{Cos}\left[\frac{c}{2}\right]-i \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}}\right] \text{Sin}[c]$$

$$\sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}+i \sqrt{2} \text{ArcTan}\left[\frac{\sqrt{-1+i} \left(\text{Cos}\left[\frac{c}{2}\right]-i \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{-1-i} \sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}}\right]$$

$$\left.\left.\text{Sin}[c] \sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}\right)\right) \Big/ \left(\sqrt{\text{Cos}[d x]+i \text{Sin}[d x]} \sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}\right)-$$

$$\frac{1}{\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}} (1+i) \text{Cos}[c] \left(\text{Cos}\left[\frac{c}{2}\right]-i \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{\text{Cos}[d x]+i \text{Sin}[d x]}$$

$$\left(-\frac{\left(\frac{1}{4}+\frac{i}{4}\right) \text{Sec}\left[\frac{d x}{2}\right]^2 \left(\text{Cos}\left[\frac{c}{2}\right]-i \text{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}}+\left(\text{ArcTan}\left[\right.\right.\right.$$

$$\left.\left.\frac{(-1)^{1/4} \left(\text{Cos}\left[\frac{c}{2}\right]-i \text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i+\text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d x}{2}\right]}}\right] \text{Sec}\left[\frac{d x}{2}\right]^2 \text{Sin}[c]\right) \Big/ \left(2 \sqrt{2}\right.$$

$$\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+\left(\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right.$$

$$\left.\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\mathrm{Sin}[c]\right)\Bigg/\left(2\sqrt{2}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\mathrm{i}\sqrt{2}\,\mathrm{Sin}[c]\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\left(\frac{\sqrt{-1+\mathrm{i}}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.$$

$$\left(\sqrt{-1+\mathrm{i}}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg/\left(4\sqrt{-1-\mathrm{i}}\right.$$

$$\left.\left.\left.\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Bigg/\left(1-\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\sqrt{2}\,\mathrm{Sin}[c]\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\left(\frac{(-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.$$

$$\left((-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg/\left(4\left(\mathrm{i}-\mathrm{Tan}\left[\right.\right.\right.$$

$$\left.\left.\left.\left.\left.\left.\left.\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Bigg/\left(1+\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\right)\right)+$$

$$\frac{1}{2\,d\,\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^{3/2}}\,3\,\mathrm{i}\,\mathrm{Cos}[c+d\,x]^2\,\left(e\,\mathrm{Sec}[c+d\,x]\right)^{7/2}$$

$$\left(\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]\right)^{3/2}$$

$$\left(\frac{1}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d x}{2}\right]}}\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\mathrm{Cos}[c]\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\sqrt{\mathrm{Cos}[d x]+\mathrm{i}\,\mathrm{Sin}[d x]}$$

$$\left(\mathrm{Cos}\left[\frac{c}{2}\right]\left((2-2\,\mathrm{i})\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d x}{2}\right]}-\right.\right.$$

$$\sqrt{2}\,\mathrm{Log}\left[\left((2+2\,\mathrm{i})\,\mathrm{Cos}\left[\frac{d x}{2}\right]\left(1-\mathrm{i}\,\mathrm{Cot}\left[\frac{c}{2}\right]\right)\mathrm{Sin}\left[\frac{c}{2}\right]^2\left(\sqrt{2}\sqrt{-1+\mathrm{Sin}[c]}+\right.\right.\right.$$

$$\sqrt{2}\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d x}{2}\right]-2\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d x}{2}\right]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d x}{2}\right]}+\mathrm{Cot}\left[\frac{c}{2}\right]$$

$$\left(-\sqrt{2}\sqrt{-1+\mathrm{Sin}[c]}+\sqrt{2}\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d x}{2}\right]+2\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d x}{2}\right]}\right.$$

$$\left.\left.\left.\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d x}{2}\right]}\right)\right)\right)\Big/\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left.\left(\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right)\right)\right]\sqrt{-1+\mathrm{Sin}[c]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d x}{2}\right]}+$$

$$\sqrt{2}\,\mathrm{Log}\left[\left((2-2\,\mathrm{i})\,\mathrm{Cos}\left[\frac{d x}{2}\right]\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\sqrt{1+\mathrm{Sin}[c]}-\right.\right.\right.\right.$$

$$\left.\sqrt{2}\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d x}{2}\right]+2\,\mathrm{i}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d x}{2}\right]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d x}{2}\right]}\right)+$$

$$\mathrm{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\sqrt{1+\mathrm{Sin}[c]}+\sqrt{2}\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d x}{2}\right]+2\,\mathrm{i}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d x}{2}\right]}\right.$$

$$\left.\left.\left.\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d x}{2}\right]}\right)\right)\right)\Big/\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left.\left.\left(\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]-\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right)\right)\right]\sqrt{1+\mathrm{Sin}[c]}\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d x}{2}\right]}\right)-$$

$$\text{Sin}\left[\frac{c}{2}\right]\left(\left(2+2\,i\right)\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\text{Log}\left[\left(\left(2+2\,i\right)\text{Cos}\left[\frac{d\,x}{2}\right]\left(1-i\,\text{Cot}\left[\frac{c}{2}\right]\right)\right.\right.\right.$$

$$\text{Sin}\left[\frac{c}{2}\right]^2\left(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]-\right.$$

$$2\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}+\text{Cot}\left[\frac{c}{2}\right]\left(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left.\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right)\right)\right]$$

$$\sqrt{-1+\text{Sin}[c]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\text{Log}\left[\left(\left(2-2\,i\right)\text{Cos}\left[\frac{d\,x}{2}\right]\left(\text{Cos}\left[\frac{c}{2}\right]+i\,\text{Sin}\left[\frac{c}{2}\right]\right)\right.\right.$$

$$\left(\text{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}-\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+\right.\right.$$

$$\left.2\,i\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\text{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}+\right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,i\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]-\right.\right.$$

$$\left.\left.\left.\left.\left.\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right)\right)\right]\sqrt{1+\text{Sin}[c]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)-$$

$$\left(\left(1+i\right)\text{Cos}[d\,x]\,\text{Sec}[c+d\,x]\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\text{Sin}[c]^2\right.$$

$$\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)$$

$$\left((1+i)\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\right.$$

$$\sqrt{2}\,\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\mathrm{Sin}[c]\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$i\sqrt{2}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\left.\mathrm{Sin}[c]\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\middle/\left(\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right.\right.$$

$$\left(-\left(\left(\left(\frac{1}{4}+\frac{i}{4}\right)\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\mathrm{Sin}[c]\sqrt{\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]}\right.\right.\right.$$

$$\left((1+i)\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\mathrm{ArcTan}\left[\right.\right.$$

$$\left.\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\mathrm{Sin}[c]\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$i\sqrt{2}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\left.\mathrm{Sin}[c]\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Big/\left(i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)-$$

$$\left(\left(\frac{1}{2}+\frac{i}{2}\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\mathrm{Sin}[c]\left(i\,\mathrm{Cos}[d\,x]-\mathrm{Sin}[d\,x]\right)\right.$$

$$\left((1+i)\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\right.$$

$$\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\mathrm{Sin}[c]$$

$$\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+i\sqrt{2}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\mathrm{Sin}[c]\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Big/\left(\sqrt{\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]}\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)-$$

$$\frac{1}{\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}(1+i)\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\mathrm{Sin}[c]\sqrt{\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]}$$

$$\left(-\frac{\left(\frac{1}{4}+\frac{i}{4}\right)\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+\left(\mathrm{ArcTan}\left[\right.\right.\right.$$

$$\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\Big]\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\text{Sin}[c]\Bigg)\Bigg/\Bigg(2\sqrt{2}$$

$$\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+\Bigg(\mathrm{i}\,\text{ArcTan}\Bigg[\frac{\sqrt{-1+\mathrm{i}}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\Bigg]$$

$$\text{Sec}\left[\frac{d\,x}{2}\right]^2\text{Sin}[c]\Bigg)\Bigg/\Bigg(2\sqrt{2}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+$$

$$\Bigg(\mathrm{i}\sqrt{2}\,\text{Sin}[c]\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\,\Bigg(\frac{\sqrt{-1+\mathrm{i}}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}+$$

$$\Bigg(\sqrt{-1+\mathrm{i}}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg/\Bigg(4\sqrt{-1-\mathrm{i}}$$

$$\left(\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\Bigg)\Bigg)\Bigg)\Bigg/\Bigg(1-\frac{\mathrm{i}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)+$$

$$\Bigg(\sqrt{2}\,\text{Sin}[c]\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\,\Bigg(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}+$$

$$\Bigg((-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg/$$

$$\Bigg(4\left(\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\Bigg)\Bigg)\Bigg)\Bigg/\Bigg(1+\frac{\mathrm{i}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)$$

Problem 424: Result more than twice size of optimal antiderivative.

$$\int \frac{(e\,\mathrm{Sec}[c+d\,x])^{5/2}}{(a+i\,a\,\mathrm{Tan}[c+d\,x])^{3/2}}\,dx$$

Optimal (type 3, 365 leaves, 11 steps):

$$-\frac{i\sqrt{2}\,e^{5/2}\,\mathrm{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]}{a^{3/2}\,d}+\frac{i\sqrt{2}\,e^{5/2}\,\mathrm{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]}{a^{3/2}\,d}+$$
$$\frac{1}{\sqrt{2}\,a^{3/2}\,d}i\,e^{5/2}\,\mathrm{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\,(a+i\,a\,\mathrm{Tan}[c+d\,x])\right]-$$
$$\frac{1}{\sqrt{2}\,a^{3/2}\,d}i\,e^{5/2}\,\mathrm{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\,(a+i\,a\,\mathrm{Tan}[c+d\,x])\right]+$$
$$\frac{4\,i\,e^2\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}{a\,d\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}$$

Result (type 3, 1563 leaves):

$$\Big(\mathrm{Cos}[c+d\,x]\,(e\,\mathrm{Sec}[c+d\,x])^{5/2}\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^2$$
$$\big(\mathrm{Cos}[d\,x]\,(4\,i\,\mathrm{Cos}[c]-4\,\mathrm{Sin}[c])+(4\,\mathrm{Cos}[c]+4\,i\,\mathrm{Sin}[c])\,\mathrm{Sin}[d\,x]\big)\Big)\Big/$$
$$\left(d\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^{3/2}\right)-\left((1+i)\left(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$
$$\left.i\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+i}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)$$
$$(e\,\mathrm{Sec}[c+d\,x])^{5/2}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)(\mathrm{Cos}[2\,c]+i\,\mathrm{Sin}[2\,c])$$
$$\left(-\mathrm{Cos}[2\,c]\,\sqrt{\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]}-i\,\mathrm{Sin}[2\,c]\,\sqrt{\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]}\right)$$
$$\left.(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^{3/2}\,\sqrt{2\,\mathrm{Cos}[d\,x]+2\,i\,\mathrm{Sin}[d\,x]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(d\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.\left(-\left(\left(\left(\frac{1}{4}+\frac{\mathbb{i}}{4}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.\right.\right.$$

$$\left.\mathbb{i}\,\text{ArcTan}\left[\frac{\sqrt{-1+\mathbb{i}}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathbb{i}}\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)$$

$$\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}[2\,c]+\mathbb{i}\,\text{Sin}[2\,c]\right)$$

$$\left.\sqrt{2\,\text{Cos}[d\,x]+2\,\mathbb{i}\,\text{Sin}[d\,x]}\right)\Big/\left.\left(\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)-$$

$$\left(\left(\frac{1}{4}+\frac{\mathbb{i}}{4}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\mathbb{i}\,\text{ArcTan}\left[\right.\right.\right.$$

$$\left.\left.\frac{\sqrt{-1+\mathbb{i}}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathbb{i}}\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left.\left(\text{Cos}[2\,c]+\mathbb{i}\,\text{Sin}[2\,c]\right)\sqrt{2\,\text{Cos}[d\,x]+2\,\mathbb{i}\,\text{Sin}[d\,x]}\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}-\left(\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.\mathbb{i}\,\text{ArcTan}\left[\frac{\sqrt{-1+\mathbb{i}}\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathbb{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathbb{i}}\sqrt{\mathbb{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]-\mathbb{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)$$

$$\left(\mathrm{Cos}[2\,c]+\mathrm{i}\,\mathrm{Sin}[2\,c]\right)\left(2\,\mathrm{i}\,\mathrm{Cos}[d\,x]-2\,\mathrm{Sin}[d\,x]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\Bigg)\Bigg/$$

$$\Bigg(\sqrt{2\,\mathrm{Cos}[d\,x]+2\,\mathrm{i}\,\mathrm{Sin}[d\,x]}\;\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\Bigg)-\frac{1}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}$$

$$(1+\mathrm{i})\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}[2\,c]+\mathrm{i}\,\mathrm{Sin}[2\,c]\right)\sqrt{2\,\mathrm{Cos}[d\,x]+2\,\mathrm{i}\,\mathrm{Sin}[d\,x]}$$

$$\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\Bigg(-\Bigg(\Bigg(\mathrm{i}\,\Bigg(\frac{\sqrt{-1+\mathrm{i}}\;\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\,\sqrt{-1-\mathrm{i}}\;\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+$$

$$\Bigg(\sqrt{-1+\mathrm{i}}\;\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\Bigg)\Bigg/\Bigg(4\,\sqrt{-1-\mathrm{i}}$$

$$\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\Bigg)\Bigg)\Bigg)\Bigg/\left(1-\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\Bigg(\frac{(-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)}{4\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\;\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}+$$

$$\frac{(-1)^{1/4}\,\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{4\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}}\Bigg)\Bigg/$$

$$\left(1+\frac{\mathrm{i}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)^2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)}{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Bigg)\Bigg)\;\left(a+\mathrm{i}\,a\,\mathrm{Tan}[c+d\,x]\right)^{3/2}\Bigg)$$

Problem 430: Result more than twice size of optimal antiderivative.

$$\int \frac{(e\,\text{Sec}[c+d\,x])^{9/2}}{(a+i\,a\,\text{Tan}[c+d\,x])^{5/2}}\,dx$$

Optimal (type 3, 411 leaves, 12 steps):

$$-\frac{5\,i\,e^{9/2}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{\sqrt{2}\,a^{5/2}\,d}+\frac{5\,i\,e^{9/2}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{\sqrt{2}\,a^{5/2}\,d}+\frac{1}{2\,\sqrt{2}\,a^{5/2}\,d}5\,i\,e^{9/2}\,\text{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,(a+i\,a\,\text{Tan}[c+d\,x])\right]-\frac{1}{2\,\sqrt{2}\,a^{5/2}\,d}5\,i\,e^{9/2}\,\text{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,(a+i\,a\,\text{Tan}[c+d\,x])\right]+\frac{4\,i\,e^2\,(e\,\text{Sec}[c+d\,x])^{5/2}}{a\,d\,(a+i\,a\,\text{Tan}[c+d\,x])^{3/2}}+\frac{5\,i\,e^4\,\sqrt{e\,\text{Sec}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{a^3\,d}$$

Result (type 3, 1511 leaves):

$$\Big(\text{Cos}[c+d\,x]^2\,(e\,\text{Sec}[c+d\,x])^{9/2}\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^3\,\big(\text{Cos}[d\,x]\,(8\,i\,\text{Cos}[2\,c]-8\,\text{Sin}[2\,c])+\text{Sec}[c+d\,x]\,(i\,\text{Cos}[3\,c]-\text{Sin}[3\,c])+(8\,\text{Cos}[2\,c]+8\,i\,\text{Sin}[2\,c])\,\text{Sin}[d\,x]\big)\Big)\Big/$$

$$\left(d\,(a+i\,a\,\text{Tan}[c+d\,x])^{5/2}\right)-\left((5+5\,i)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.i\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)$$

$$\text{Cos}[c+d\,x]\,(e\,\text{Sec}[c+d\,x])^{9/2}\left(\text{Cos}\left[\frac{5\,c}{2}\right]+i\,\text{Sin}\left[\frac{5\,c}{2}\right]\right)$$

$$\left(-\frac{5}{2}\,\text{Cos}[3\,c]\,\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}-\frac{5}{2}\,i\,\text{Sin}[3\,c]\,\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\right)$$

$$\left.(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^3\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(d\,\sqrt{2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\right)-\left(\left(\left(\left(\frac{5}{4}+\frac{5\,i}{4}\right)\left(\text{ArcTan}\left[\frac{(-1)^{1/4}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.\right.\right.$$

$$\left.\left.\left.\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{5\,c}{2}\right]+\right.\right.\right.$$

$$\left.\left.\mathrm{i}\,\mathrm{Sin}\left[\frac{5\,c}{2}\right]\right)\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}\right)\Big/\left(\sqrt{2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)-$$

$$\left(\left(\frac{5}{2}+\frac{5\,\mathrm{i}}{2}\right)\left(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2$$

$$\left.\left(\mathrm{Cos}\left[\frac{5\,c}{2}\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{5\,c}{2}\right]\right)\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(2\,\mathrm{i}-2\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}-\left(\left(\frac{5}{2}+\frac{5\,\mathrm{i}}{2}\right)\left(\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]-\right.\right.$$

$$\left.\mathrm{i}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\right)$$

$$\left.\left(\mathrm{Cos}\left[\frac{5\,c}{2}\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{5\,c}{2}\right]\right)\left(\mathrm{i}\,\mathrm{Cos}[d\,x]-\mathrm{Sin}[d\,x]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left(\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\ \sqrt{2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\right)-$$

$$\left((5+5\,i)\left(\text{Cos}\left[\frac{5\,c}{2}\right]+i\,\text{Sin}\left[\frac{5\,c}{2}\right]\right)\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\ \sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left(-\left(\left(i\left(\frac{\sqrt{-1+i}\ \text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{-1-i}\ \sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\ \sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.\right.\right.$$

$$\left(\sqrt{-1+i}\ \text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(4\sqrt{-1-i}\right.$$

$$\left.\left.\left.\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Big/\left(1-\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)+$$

$$\left(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\ \sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\left((-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\right.\right.$$

$$\left.\left.\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/\left(4\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\Big/$$

$$\left.\left.\left(1+\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left.\left(\sqrt{2\,i-2\,\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\ (a+i\,a\,\text{Tan}[c+d\,x])^{5/2}\Bigg)$$

Problem 431: Result more than twice size of optimal antiderivative.

$$\int \frac{(e\,\mathrm{Sec}[c+d\,x])^{7/2}}{(a+i\,a\,\mathrm{Tan}[c+d\,x])^{5/2}}\,dx$$

Optimal (type 3, 527 leaves, 12 steps):

$$\frac{4\,i\,e^2\,(e\,\mathrm{Sec}[c+d\,x])^{3/2}}{3\,a\,d\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^{3/2}}+\frac{i\,\sqrt{2}\,e^{7/2}\,\mathrm{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]\,\mathrm{Sec}[c+d\,x]}{a^{3/2}\,d\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}-$$
$$\frac{i\,\sqrt{2}\,e^{7/2}\,\mathrm{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\mathrm{Sec}[c+d\,x]}}\right]\,\mathrm{Sec}[c+d\,x]}{a^{3/2}\,d\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}-$$
$$\left(i\,e^{7/2}\,\mathrm{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\,(a-i\,a\,\mathrm{Tan}[c+d\,x])\right]\right.$$
$$\left.\mathrm{Sec}[c+d\,x]\right)\Big/\left(\sqrt{2}\,a^{3/2}\,d\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}\right)+$$
$$\left(i\,e^{7/2}\,\mathrm{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}}{\sqrt{e\,\mathrm{Sec}[c+d\,x]}}+\mathrm{Cos}[c+d\,x]\,(a-i\,a\,\mathrm{Tan}[c+d\,x])\right]\right.$$
$$\left.\mathrm{Sec}[c+d\,x]\right)\Big/\left(\sqrt{2}\,a^{3/2}\,d\,\sqrt{a-i\,a\,\mathrm{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}\right)$$

Result (type 3, 5863 leaves):

$$\left(\mathrm{Cos}[c+d\,x]\,(e\,\mathrm{Sec}[c+d\,x])^{7/2}\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^3\right.$$
$$\left.\left(\mathrm{Cos}[2\,d\,x]\left(\frac{4}{3}\,i\,\mathrm{Cos}[c]-\frac{4\,\mathrm{Sin}[c]}{3}\right)+\left(\frac{4\,\mathrm{Cos}[c]}{3}+\frac{4}{3}\,i\,\mathrm{Sin}[c]\right)\mathrm{Sin}[2\,d\,x]\right)\right)\Big/$$
$$\left(d\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^{5/2}\right)+\frac{1}{d\,\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^{5/2}}$$
$$(1+i)\,\mathrm{Cos}[c]\,\mathrm{Cos}[c+d\,x]\,(e\,\mathrm{Sec}[c+d\,x])^{7/2}$$
$$\left(\mathrm{Cos}\left[\frac{c}{2}\right]-i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\mathrm{Sin}[c]\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^{5/2}\sqrt{\frac{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}$$
$$\left(\mathrm{Cos}\left[\frac{c}{2}\right]\left((2-2\,i)\,\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}-\sqrt{2}\,\mathrm{Log}\left[\left((1+i)\,\left(2-2\,i\,\mathrm{Cot}\left[\frac{c}{2}\right]\right)\mathrm{Sin}\left[\frac{c}{2}\right]^2\right.\right.\right.\right.$$
$$\left(\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]-2\,\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\mathrm{Cot}\left[\frac{c}{2}\right]\left(-\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+\right.$$

$$\left.\left.\left.2\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(-\mathrm{Sin}\left[\frac{c}{2}\right]\left(-1+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)+\mathrm{Cos}\left[\frac{c}{2}\right]\left(1+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\Big]$$

$$\sqrt{-1+\mathrm{Sin}[c]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\mathrm{Log}\Big[-\left(\left((2-2\,i)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+i\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.\right.$$

$$\left(\mathrm{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}-\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\,i\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right.\right.$$

$$\left.\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+\mathrm{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}+\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}\right.$$

$$\left.\left.\left.\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\,i\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.$$

$$\left.\left.\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]\left(-1+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)+\mathrm{Sin}\left[\frac{c}{2}\right]\left(1+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\right)\Big]$$

$$\left.\sqrt{1+\mathrm{Sin}[c]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)-\mathrm{Sin}\left[\frac{c}{2}\right]\left((2+2\,i)\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\right.$$

$$\sqrt{2}\,\mathrm{Log}\Big[\left((1+i)\left(2-2\,i\,\mathrm{Cot}\left[\frac{c}{2}\right]\right)\mathrm{Sin}\left[\frac{c}{2}\right]^2\left(\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}\right.\right.$$

$$\mathrm{Tan}\left[\frac{d\,x}{2}\right]-2\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\mathrm{Cot}\left[\frac{c}{2}\right]\left(-\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}+\right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{-1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\sqrt{i-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(-\mathrm{Sin}\left[\frac{c}{2}\right]\left(-1+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)+\right.\right.$$

$$\left.\left.\mathrm{Cos}\left[\frac{c}{2}\right]\left(1+\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\Big]\sqrt{-1+\mathrm{Sin}[c]}\,\sqrt{i+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\mathrm{Log}\Big[$$

$$- \left(\left((2-2\,i)\left(\text{Cos}\left[\frac{c}{2}\right]+i\,\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}-\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,i\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\text{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,i\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]\left(-1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)+\text{Sin}\left[\frac{c}{2}\right]\left(1+\text{Tan}\left[\frac{d\,x}{2}\right]\right)\right)\right)\right]\sqrt{1+\text{Sin}[c]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)+$$

$$\Bigg((1+i)\,\text{Cos}[2\,c]^2\,\text{Cos}[d\,x]\,(e\,\text{Sec}[c+d\,x])^{7/2}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)$$

$$(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^{7/2}$$

$$\Bigg((1+i)$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$\sqrt{2}\,\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$i\,\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+i}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\text{Sin}[c]\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Bigg/$$

$$\left(d\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\left(-\left(\left(\left(\frac{1}{4}+\frac{\mathrm{i}}{4}\right)\text{Cos}[2\,c]\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\right.\right.\right.\right.$$

$$\sqrt{\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x]}\,\left((1+\mathrm{i})\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}+\right.$$

$$\sqrt{2}\,\text{ArcTan}\left[\frac{(-1)^{1/4}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]\text{Sin}[c]\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$\mathrm{i}\,\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\left.\text{Sin}[c]\,\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Bigg/\left(\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)-$$

$$\left(\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\text{Cos}[2\,c]\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\,\left(\mathrm{i}\,\text{Cos}[d\,x]-\text{Sin}[d\,x]\right)\right.$$

$$\left((1+\mathrm{i})\,\left(\text{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\right.$$

$$\text{ArcTan}\Big[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\Big]\,\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}+i\,\sqrt{2}$$

$$\text{ArcTan}\Big[\frac{\sqrt{-1+i}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\Big]\,\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\Bigg)\Bigg)\Big/$$

$$\left(\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)-\frac{1}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}$$

$$(1+i)\,\text{Cos}[2\,c]\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}$$

$$\Bigg(-\frac{\left(\frac{1}{4}+\frac{i}{4}\right)\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}+$$

$$\frac{\text{ArcTan}\Big[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\Big]\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\,\text{Sin}[c]}{2\,\sqrt{2}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+$$

$$\left(i\,\text{ArcTan}\Big[\frac{\sqrt{-1+i}\,\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\Big]\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\,\text{Sin}[c]\right)\Big/$$

$$\left(2\,\sqrt{2}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(i\,\sqrt{2}\,\text{Sin}[c]\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\,\left(\frac{\sqrt{-1+i}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\,\sqrt{-1-i}\,\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.$$

$$\left(\sqrt{-1+i}\ \text{Sec}\left[\frac{d\,x}{2}\right]^2 \left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right) \sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right) \Big/ \left(4\sqrt{-1-i}\right.$$

$$\left.\left.\left.\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right) \Big/ \left(1-\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\left(\sqrt{2}\ \text{Sin}[c]\ \sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\ \left(\frac{(-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{4\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\ \sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}}+\right.\right.$$

$$\left((-1)^{1/4}\,\text{Sec}\left[\frac{d\,x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{i+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\Big/$$

$$\left.\left.\left.\left(4\left(i-\text{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)\right)\right)\Big/\left(1+\frac{i\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)^2\left(i+\text{Tan}\left[\frac{d\,x}{2}\right]\right)}{i-\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)$$

$$\left.(a+i\,a\,\text{Tan}[c+d\,x])^{5/2}\right| - \frac{1}{d\,(a+i\,a\,\text{Tan}[c+d\,x])^{5/2}}\,i$$

$$\text{Cos}[c+d\,x]\,(e\,\text{Sec}[c+d\,x])^{7/2}\,(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x])^{5/2}$$

$$\left(\frac{1}{\sqrt{i-\text{Tan}\left[\frac{d\,x}{2}\right]}}\right.$$

$$\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\text{Cos}[2\,c]\left(\text{Cos}\left[\frac{c}{2}\right]-i\,\text{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]}}$$

$$\left(\text{Cos}\left[\frac{c}{2}\right]\left(\left(2-2\,\mathrm{i}\right)\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}-\sqrt{2}\,\text{Log}\left[\left(\left(2+2\,\mathrm{i}\right)\text{Cos}\left[\frac{d\,x}{2}\right]\left(1-\mathrm{i}\,\text{Cot}\left[\frac{c}{2}\right]\right)\right.\right.\right.\right.$$

$$\text{Sin}\left[\frac{c}{2}\right]^2\left(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]-\right.$$

$$2\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+\text{Cot}\left[\frac{c}{2}\right]\left(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left.\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right)\right)\right]$$

$$\sqrt{-1+\text{Sin}[c]}\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\text{Log}\left[\left(\left(2-2\,\mathrm{i}\right)\text{Cos}\left[\frac{d\,x}{2}\right]\left(\text{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\right.\right.$$

$$\left(\text{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}-\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+\right.\right.$$

$$\left.2\,\mathrm{i}\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)+\text{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\text{Sin}[c]}+\right.$$

$$\left.\left.\left.\sqrt{2}\,\sqrt{1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/$$

$$\left.\left(\left(\text{Cos}\left[\frac{c}{2}\right]-\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{c}{2}\right]+\text{Sin}\left[\frac{c}{2}\right]\right)\left(\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]-\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right)\right)\right]$$

$$\left.\sqrt{1+\text{Sin}[c]}\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}\right)-\text{Sin}\left[\frac{c}{2}\right]\left(\left(2+2\,\mathrm{i}\right)\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}+\right.$$

$$\sqrt{2}\,\text{Log}\left[\left(\left(2+2\,\mathrm{i}\right)\text{Cos}\left[\frac{d\,x}{2}\right]\left(1-\mathrm{i}\,\text{Cot}\left[\frac{c}{2}\right]\right)\text{Sin}\left[\frac{c}{2}\right]^2\left(\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\right.\right.\right.$$

$$\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]-2\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\sqrt{\mathrm{i}+\text{Tan}\left[\frac{d\,x}{2}\right]}+\text{Cot}\left[\frac{c}{2}\right]$$

$$\left(-\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}+\sqrt{2}\,\sqrt{-1+\text{Sin}[c]}\,\text{Tan}\left[\frac{d\,x}{2}\right]+2\sqrt{\mathrm{i}-\text{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left.\left.\left.\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.\right.$$

$$\left.\left.\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\right)\right]\sqrt{-1+\mathrm{Sin}[c]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$\sqrt{2}\,\mathrm{Log}\left[\left((2-2\,\mathrm{i})\,\mathrm{Cos}\left[\frac{d\,x}{2}\right]\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Sin}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}-\right.\right.\right.\right.$$

$$\left.\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)+$$

$$\mathrm{Cos}\left[\frac{c}{2}\right]\left(\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}+\sqrt{2}\,\sqrt{1+\mathrm{Sin}[c]}\,\mathrm{Tan}\left[\frac{d\,x}{2}\right]+2\,\mathrm{i}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left.\left.\left.\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\right)\Big/\left(\left(\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{Sin}\left[\frac{c}{2}\right]\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]+\mathrm{Sin}\left[\frac{c}{2}\right]\right)\right.\right.$$

$$\left.\left.\left.\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\right)\right]\sqrt{1+\mathrm{Sin}[c]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)-$$

$$\left((1+\mathrm{i})\,\mathrm{Cos}[d\,x]\,\mathrm{Sec}[c+d\,x]\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\mathrm{Sin}[2\,c]^2\,\big(\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]\big)\right.$$

$$\left((1+\mathrm{i})\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\right.$$

$$\sqrt{2}\,\mathrm{ArcTan}\left[\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\mathrm{Sin}[c]\,\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$\mathrm{i}\,\sqrt{2}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\mathrm{Sin}[c]\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Bigg/\left(\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right.$$

$$\left(-\left(\left(\left(\frac{1}{4}+\frac{\mathrm{i}}{4}\right)\mathrm{Sec}\left[\frac{d\,x}{2}\right]^2\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\mathrm{Sin}[2\,c]\sqrt{\mathrm{Cos}[d\,x]+\mathrm{i}\,\mathrm{Sin}[d\,x]}\right.\right.\right.$$

$$\left((1+\mathrm{i})\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\,\mathrm{ArcTan}\right[$$

$$\left.\frac{(-1)^{1/4}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]\mathrm{Sin}[c]\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+$$

$$\mathrm{i}\sqrt{2}\,\mathrm{ArcTan}\left[\frac{\sqrt{-1+\mathrm{i}}\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}{\sqrt{-1-\mathrm{i}}\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}}\right]$$

$$\left.\left.\left.\mathrm{Sin}[c]\sqrt{\mathrm{i}+\mathrm{Tan}\left[\frac{d\,x}{2}\right]}\right)\right)\Bigg/\left(\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]\right)^{3/2}\right)-$$

$$\left(\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\mathrm{Sin}[2\,c]\left(\mathrm{i}\,\mathrm{Cos}[d\,x]-\mathrm{Sin}[d\,x]\right)\right.$$

$$\left((1+\mathrm{i})\left(\mathrm{Cos}\left[\frac{c}{2}\right]-\mathrm{i}\,\mathrm{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\mathrm{i}-\mathrm{Tan}\left[\frac{d\,x}{2}\right]}+\sqrt{2}\right.$$

$$\text{ArcTan}\left[\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{\text{i}-\text{Tan}\left[\frac{d x}{2}\right]}}\right]\text{Sin}[c]$$

$$\sqrt{\text{i}+\text{Tan}\left[\frac{d x}{2}\right]}+\text{i}\sqrt{2}\,\text{ArcTan}\left[\frac{\sqrt{-1+\text{i}}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{-1-\text{i}}\sqrt{\text{i}-\text{Tan}\left[\frac{d x}{2}\right]}}\right]$$

$$\left.\left.\text{Sin}[c]\sqrt{\text{i}+\text{Tan}\left[\frac{d x}{2}\right]}\right)\right)\Big/\left(\sqrt{\text{Cos}[d x]+\text{i}\,\text{Sin}[d x]}\sqrt{\text{i}-\text{Tan}\left[\frac{d x}{2}\right]}\right)-$$

$$\frac{1}{\sqrt{\text{i}-\text{Tan}\left[\frac{d x}{2}\right]}}(1+\text{i})\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\text{Sin}[2 c]\sqrt{\text{Cos}[d x]+\text{i}\,\text{Sin}[d x]}$$

$$\left(-\frac{\left(\frac{1}{4}+\frac{\text{i}}{4}\right)\text{Sec}\left[\frac{d x}{2}\right]^2\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)}{\sqrt{\text{i}-\text{Tan}\left[\frac{d x}{2}\right]}}+\left(\text{ArcTan}\left[\right.\right.\right.$$

$$\left.\left.\frac{(-1)^{1/4}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{\text{i}-\text{Tan}\left[\frac{d x}{2}\right]}}\right]\text{Sec}\left[\frac{d x}{2}\right]^2\text{Sin}[c]\right)\Big/\left(2\sqrt{2}\right.$$

$$\left.\sqrt{\text{i}+\text{Tan}\left[\frac{d x}{2}\right]}\right)+\left(\text{i}\,\text{ArcTan}\left[\frac{\sqrt{-1+\text{i}}\left(\text{Cos}\left[\frac{c}{2}\right]-\text{i}\,\text{Sin}\left[\frac{c}{2}\right]\right)\sqrt{\text{i}+\text{Tan}\left[\frac{d x}{2}\right]}}{\sqrt{-1-\text{i}}\sqrt{\text{i}-\text{Tan}\left[\frac{d x}{2}\right]}}\right]\right.$$

$$\left.\text{Sec}\left[\frac{d x}{2}\right]^2\text{Sin}[c]\right)\Big/\left(2\sqrt{2}\sqrt{\text{i}+\text{Tan}\left[\frac{d x}{2}\right]}\right)+$$

$$\Bigg(\mathrm{i}\,\sqrt{2}\,\mathrm{Sin}[c]\,\sqrt{\mathrm{i}+\mathrm{Tan}\Big[\frac{d\,x}{2}\Big]}\,\Bigg(\frac{\sqrt{-1+\mathrm{i}}\,\mathrm{Sec}\big[\frac{d\,x}{2}\big]^2\,\big(\mathrm{Cos}\big[\frac{c}{2}\big]-\mathrm{i}\,\mathrm{Sin}\big[\frac{c}{2}\big]\big)}{4\,\sqrt{-1-\mathrm{i}}\,\sqrt{\mathrm{i}-\mathrm{Tan}\big[\frac{d\,x}{2}\big]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\big[\frac{d\,x}{2}\big]}}+$$

$$\Bigg(\sqrt{-1+\mathrm{i}}\,\mathrm{Sec}\Big[\frac{d\,x}{2}\Big]^2\,\Big(\mathrm{Cos}\Big[\frac{c}{2}\Big]-\mathrm{i}\,\mathrm{Sin}\Big[\frac{c}{2}\Big]\Big)\,\sqrt{\mathrm{i}+\mathrm{Tan}\Big[\frac{d\,x}{2}\Big]}\Bigg)\Big/\Bigg(4\,\sqrt{-1-\mathrm{i}}$$

$$\Big(\mathrm{i}-\mathrm{Tan}\Big[\frac{d\,x}{2}\Big]\Big)^{3/2}\Bigg)\Bigg)\Bigg)\Big/\Bigg(1-\frac{\mathrm{i}\,\big(\mathrm{Cos}\big[\frac{c}{2}\big]-\mathrm{i}\,\mathrm{Sin}\big[\frac{c}{2}\big]\big)^2\,\big(\mathrm{i}+\mathrm{Tan}\big[\frac{d\,x}{2}\big]\big)}{\mathrm{i}-\mathrm{Tan}\big[\frac{d\,x}{2}\big]}\Bigg)+$$

$$\Bigg(\sqrt{2}\,\mathrm{Sin}[c]\,\sqrt{\mathrm{i}+\mathrm{Tan}\Big[\frac{d\,x}{2}\Big]}\,\Bigg(\frac{(-1)^{1/4}\,\mathrm{Sec}\big[\frac{d\,x}{2}\big]^2\,\big(\mathrm{Cos}\big[\frac{c}{2}\big]-\mathrm{i}\,\mathrm{Sin}\big[\frac{c}{2}\big]\big)}{4\,\sqrt{\mathrm{i}-\mathrm{Tan}\big[\frac{d\,x}{2}\big]}\,\sqrt{\mathrm{i}+\mathrm{Tan}\big[\frac{d\,x}{2}\big]}}+$$

$$\Bigg((-1)^{1/4}\,\mathrm{Sec}\Big[\frac{d\,x}{2}\Big]^2\,\Big(\mathrm{Cos}\Big[\frac{c}{2}\Big]-\mathrm{i}\,\mathrm{Sin}\Big[\frac{c}{2}\Big]\Big)\,\sqrt{\mathrm{i}+\mathrm{Tan}\Big[\frac{d\,x}{2}\Big]}\Bigg)\Big/$$

$$\Bigg(4\,\Big(\mathrm{i}-\mathrm{Tan}\Big[\frac{d\,x}{2}\Big]\Big)^{3/2}\Bigg)\Bigg)\Bigg)\Big/\Bigg(1+\frac{\mathrm{i}\,\big(\mathrm{Cos}\big[\frac{c}{2}\big]-\mathrm{i}\,\mathrm{Sin}\big[\frac{c}{2}\big]\big)^2\,\big(\mathrm{i}+\mathrm{Tan}\big[\frac{d\,x}{2}\big]\big)}{\mathrm{i}-\mathrm{Tan}\big[\frac{d\,x}{2}\big]}\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)$$

Problem 443: Result unnecessarily involves higher level functions.

$$\int\frac{(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{(a+\mathrm{i}\,a\,\mathrm{Tan}[e+f\,x])^{7/3}}\,dx$$

Optimal (type 3, 437 leaves, 9 steps):

$$\frac{i\,(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{4\,f\,(a+i\,a\,\mathrm{Tan}[e+f\,x])^{7/3}}-\frac{5\,x\,(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{72\times 2^{2/3}\,a^{5/3}\,(a-i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}\,(a+i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}}+$$
$$\frac{5\,i\,\mathrm{ArcTan}\left[\frac{a^{1/3}+2^{2/3}\,(a-i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}}{\sqrt{3}\,a^{1/3}}\right]\,(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{12\times 2^{2/3}\,\sqrt{3}\,a^{5/3}\,f\,(a-i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}\,(a+i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}}-$$
$$\frac{5\,i\,\mathrm{Log}[\mathrm{Cos}[e+f\,x]]\,(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{72\times 2^{2/3}\,a^{5/3}\,f\,(a-i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}\,(a+i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}}-$$
$$\frac{5\,i\,\mathrm{Log}\left[2^{1/3}\,a^{1/3}-(a-i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}\right]\,(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{24\times 2^{2/3}\,a^{5/3}\,f\,(a-i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}\,(a+i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}}+$$
$$\frac{5\,i\,(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{24\,f\,(a+i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}\,(a^2+i\,a^2\,\mathrm{Tan}[e+f\,x])}$$

Result (type 5, 138 leaves):

$$-\left(\left(i\,\mathrm{Sec}[e+f\,x]^2\,(d\,\mathrm{Sec}[e+f\,x])^{2/3}\left(11+11\,\mathrm{Cos}[2\,(e+f\,x)]+10\,e^{2\,i\,(e+f\,x)}\,\left(1+e^{-2\,i\,(e+f\,x)}\right)^{1/3}\right.\right.\right.$$
$$\left.\left.\mathrm{Hypergeometric2F1}\left[\frac{1}{3},\frac{1}{3},\frac{4}{3},-e^{-2\,i\,(e+f\,x)}\right]+5\,i\,\mathrm{Sin}[2\,(e+f\,x)]\right)\right)\Big/$$
$$\left.\left(48\,a^2\,f\,(-i+\mathrm{Tan}[e+f\,x])^2\,(a+i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}\right)\right)$$

Problem 444: Result unnecessarily involves higher level functions.

$$\int\frac{(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{(a+i\,a\,\mathrm{Tan}[e+f\,x])^{4/3}}\,dx$$

Optimal (type 3, 378 leaves, 8 steps):

$$\frac{i\,(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{2\,f\,(a+i\,a\,\mathrm{Tan}[e+f\,x])^{4/3}}-\frac{x\,(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{6\times 2^{2/3}\,a^{2/3}\,(a-i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}\,(a+i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}}+$$
$$\frac{i\,\mathrm{ArcTan}\left[\frac{a^{1/3}+2^{2/3}\,(a-i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}}{\sqrt{3}\,a^{1/3}}\right]\,(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{2^{2/3}\,\sqrt{3}\,a^{2/3}\,f\,(a-i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}\,(a+i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}}-$$
$$\frac{i\,\mathrm{Log}[\mathrm{Cos}[e+f\,x]]\,(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{6\times 2^{2/3}\,a^{2/3}\,f\,(a-i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}\,(a+i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}}-$$
$$\frac{i\,\mathrm{Log}\left[2^{1/3}\,a^{1/3}-(a-i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}\right]\,(d\,\mathrm{Sec}[e+f\,x])^{2/3}}{2\times 2^{2/3}\,a^{2/3}\,f\,(a-i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}\,(a+i\,a\,\mathrm{Tan}[e+f\,x])^{1/3}}$$

Result (type 5, 118 leaves):

$$\left(i\, e^{-2 i (e+f x)} \left(1+e^{2 i (e+f x)}+2 e^{2 i (e+f x)} \left(1+e^{-2 i (e+f x)}\right)^{1/3} \text{Hypergeometric2F1}\left[\frac{1}{3},\frac{1}{3},\frac{4}{3},-e^{-2 i (e+f x)}\right]\right) (d \,\text{Sec}[e+f x])^{2/3}\right) \Big/ \left(4 a f (a+i a \,\text{Tan}[e+f x])^{1/3}\right)$$

Problem 445: Result unnecessarily involves higher level functions.

$$\int \frac{(d \,\text{Sec}[e+f x])^{2/3}}{(a+i a \,\text{Tan}[e+f x])^{1/3}} \, dx$$

Optimal (type 3, 340 leaves, 6 steps):

$$-\frac{a^{1/3} x (d \,\text{Sec}[e+f x])^{2/3}}{2\times 2^{2/3} (a-i a \,\text{Tan}[e+f x])^{1/3} (a+i a \,\text{Tan}[e+f x])^{1/3}}+\frac{i \sqrt{3}\, a^{1/3} \,\text{ArcTan}\left[\frac{a^{1/3}+2^{2/3} (a-i a \,\text{Tan}[e+f x])^{1/3}}{\sqrt{3}\, a^{1/3}}\right] (d \,\text{Sec}[e+f x])^{2/3}}{2^{2/3} f (a-i a \,\text{Tan}[e+f x])^{1/3} (a+i a \,\text{Tan}[e+f x])^{1/3}}-\frac{i a^{1/3} \,\text{Log}[\text{Cos}[e+f x]] (d \,\text{Sec}[e+f x])^{2/3}}{2\times 2^{2/3} f (a-i a \,\text{Tan}[e+f x])^{1/3} (a+i a \,\text{Tan}[e+f x])^{1/3}}-\frac{3 i a^{1/3} \,\text{Log}\left[2^{1/3} a^{1/3}-(a-i a \,\text{Tan}[e+f x])^{1/3}\right] (d \,\text{Sec}[e+f x])^{2/3}}{2\times 2^{2/3} f (a-i a \,\text{Tan}[e+f x])^{1/3} (a+i a \,\text{Tan}[e+f x])^{1/3}}$$

Result (type 5, 116 leaves):

$$\left(3 i \left(1+e^{-2 i (e+f x)}\right)^{1/3} \left(\frac{d\, e^{i (e+f x)}}{1+e^{2 i (e+f x)}}\right)^{2/3} \text{Hypergeometric2F1}\left[\frac{1}{3},\frac{1}{3},\frac{4}{3},-e^{-2 i (e+f x)}\right]\right) \Big/ \left(2^{2/3} \left(\frac{a\, e^{2 i (e+f x)}}{1+e^{2 i (e+f x)}}\right)^{1/3} f\right)$$

Problem 454: Result more than twice size of optimal antiderivative.

$$\int \frac{(e \,\text{Sec}[c+d x])^m}{a+i a \,\text{Tan}[c+d x]} \, dx$$

Optimal (type 5, 86 leaves, 4 steps):

$$\frac{1}{a d m} i\, 2^{-1+\frac{m}{2}} \,\text{Hypergeometric2F1}\left[2-\frac{m}{2},\frac{m}{2},\frac{2+m}{2},\frac{1}{2} (1-i \,\text{Tan}[c+d x])\right] (e \,\text{Sec}[c+d x])^m (1+i \,\text{Tan}[c+d x])^{-m/2}$$

Result (type 5, 212 leaves):

$$-\Bigg(\Bigg(\mathrm{i}\,2^{-1+m}\,e^{-\mathrm{i}\,(c+d\,m\,x)}\left(\frac{e^{\mathrm{i}\,(c+d\,x)}}{1+e^{2\,\mathrm{i}\,(c+d\,x)}}\right)^m\left(1+e^{2\,\mathrm{i}\,(c+d\,x)}\right)^m$$
$$\Bigg(e^{\mathrm{i}\,d\,(-2+m)\,x}\,m\,\text{Hypergeometric2F1}\Big[\frac{1}{2}\,(-2+m),\,m,\,\frac{m}{2},\,-e^{2\,\mathrm{i}\,(c+d\,x)}\Big]+$$
$$e^{\mathrm{i}\,(2\,c+d\,m\,x)}\,(-2+m)\,\text{Hypergeometric2F1}\Big[\frac{m}{2},\,m,\,\frac{2+m}{2},\,-e^{2\,\mathrm{i}\,(c+d\,x)}\Big]\Bigg)\,\text{Sec}[c+d\,x]^{1-m}$$
$$(e\,\text{Sec}[c+d\,x])^m\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])\Bigg)\Big/\left(d\,(-2+m)\,m\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])\right)\Bigg)$$

Problem 455: Result more than twice size of optimal antiderivative.

$$\int\frac{(e\,\text{Sec}[c+d\,x])^m}{(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^2}\,dx$$

Optimal (type 5, 86 leaves, 4 steps):

$$\frac{1}{a^2\,d\,m}\mathrm{i}\,2^{-2+\frac{m}{2}}\,\text{Hypergeometric2F1}\Big[3-\frac{m}{2},\,\frac{m}{2},\,\frac{2+m}{2},\,\frac{1}{2}\,(1-\mathrm{i}\,\text{Tan}[c+d\,x])\Big]$$
$$(e\,\text{Sec}[c+d\,x])^m\,(1+\mathrm{i}\,\text{Tan}[c+d\,x])^{-m/2}$$

Result (type 5, 279 leaves):

$$-\frac{1}{d\,(-4+m)\,(-2+m)\,m\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^2}\,\mathrm{i}\,2^{-2+m}\,e^{-\mathrm{i}\,(2\,c+d\,m\,x)}\left(\frac{e^{\mathrm{i}\,(c+d\,x)}}{1+e^{2\,\mathrm{i}\,(c+d\,x)}}\right)^m\left(1+e^{2\,\mathrm{i}\,(c+d\,x)}\right)^m$$
$$\Bigg(e^{\mathrm{i}\,d\,(-4+m)\,x}\,(-2+m)\,m\,\text{Hypergeometric2F1}\Big[\frac{1}{2}\,(-4+m),\,m,\,\frac{1}{2}\,(-2+m),\,-e^{2\,\mathrm{i}\,(c+d\,x)}\Big]+$$
$$e^{2\,\mathrm{i}\,c}\,(-4+m)\,\Bigg(2\,e^{\mathrm{i}\,d\,(-2+m)\,x}\,m\,\text{Hypergeometric2F1}\Big[\frac{1}{2}\,(-2+m),\,m,\,\frac{m}{2},\,-e^{2\,\mathrm{i}\,(c+d\,x)}\Big]+$$
$$e^{\mathrm{i}\,(2\,c+d\,m\,x)}\,(-2+m)\,\text{Hypergeometric2F1}\Big[\frac{m}{2},\,m,\,\frac{2+m}{2},\,-e^{2\,\mathrm{i}\,(c+d\,x)}\Big]\Bigg)\Bigg)$$
$$\text{Sec}[c+d\,x]^{2-m}\,(e\,\text{Sec}[c+d\,x])^m\,(\text{Cos}[d\,x]+\mathrm{i}\,\text{Sin}[d\,x])^2$$

Problem 456: Result more than twice size of optimal antiderivative.

$$\int\frac{(e\,\text{Sec}[c+d\,x])^m}{(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^3}\,dx$$

Optimal (type 5, 86 leaves, 4 steps):

$$\frac{1}{a^3\,d\,m}\mathrm{i}\,2^{-3+\frac{m}{2}}\,\text{Hypergeometric2F1}\Big[4-\frac{m}{2},\,\frac{m}{2},\,\frac{2+m}{2},\,\frac{1}{2}\,(1-\mathrm{i}\,\text{Tan}[c+d\,x])\Big]$$
$$(e\,\text{Sec}[c+d\,x])^m\,(1+\mathrm{i}\,\text{Tan}[c+d\,x])^{-m/2}$$

Result (type 5, 347 leaves):

$$-\frac{1}{d\,(-6+m)\,(-4+m)\,(-2+m)\,m\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^3}\,i\,2^{-3+m}\,e^{-i\,(3\,c+d\,m\,x)}\left(\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}\right)^m\left(1+e^{2\,i\,(c+d\,x)}\right)^m$$
$$\Bigg(e^{i\,d\,(-6+m)\,x}\,m\,(8-6\,m+m^2)\,\mathrm{Hypergeometric2F1}\left[\frac{1}{2}(-6+m),\,m,\,\frac{1}{2}(-4+m),\,-e^{2\,i\,(c+d\,x)}\right]+e^{2\,i\,c}$$
$$(-6+m)\,\Bigg(3\,e^{i\,d\,(-4+m)\,x}\,(-2+m)\,m\,\mathrm{Hypergeometric2F1}\left[\frac{1}{2}(-4+m),\,m,\,\frac{1}{2}(-2+m),\,-e^{2\,i\,(c+d\,x)}\right]+$$
$$e^{2\,i\,c}\,(-4+m)\,\Bigg(3\,e^{i\,d\,(-2+m)\,x}\,m\,\mathrm{Hypergeometric2F1}\left[\frac{1}{2}(-2+m),\,m,\,\frac{m}{2},\,-e^{2\,i\,(c+d\,x)}\right]+$$
$$e^{i\,(2\,c+d\,m\,x)}\,(-2+m)\,\mathrm{Hypergeometric2F1}\left[\frac{m}{2},\,m,\,\frac{2+m}{2},\,-e^{2\,i\,(c+d\,x)}\right]\Bigg)\Bigg)\Bigg)$$
$$\mathrm{Sec}[c+d\,x]^{3-m}\,(e\,\mathrm{Sec}[c+d\,x])^m\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^3$$

Problem 466: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Sec}[c+d\,x]^4\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^n\,dx$$

Optimal (type 3, 65 leaves, 3 steps):

$$-\frac{2\,i\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^{2+n}}{a^2\,d\,(2+n)}+\frac{i\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^{3+n}}{a^3\,d\,(3+n)}$$

Result (type 3, 143 leaves):

$$-\Bigg(\Bigg(i\,2^{3+n}\,e^{4\,i\,(c+d\,x)}\,(e^{i\,d\,x})^n\left(\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}\right)^n\left(3+e^{2\,i\,(c+d\,x)}+n\right)\mathrm{Sec}[c+d\,x]^{-n}$$
$$(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^{-n}\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^n\Bigg)\Big/\left(d\,\left(1+e^{2\,i\,(c+d\,x)}\right)^3\,(2+n)\,(3+n)\right)\Bigg)$$

Problem 467: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Sec}[c+d\,x]^2\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^n\,dx$$

Optimal (type 3, 32 leaves, 2 steps):

$$-\frac{i\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^{1+n}}{a\,d\,(1+n)}$$

Result (type 3, 111 leaves):

$$-\frac{1}{d\,(1+n)}\,i\,2^{1+n}\,e^{i\,(c+d\,x)}\,(e^{i\,d\,x})^n\left(\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}\right)^{1+n}$$
$$\mathrm{Sec}[c+d\,x]^{-n}\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^{-n}\,(a+i\,a\,\mathrm{Tan}[c+d\,x])^n$$

Problem 468: Result more than twice size of optimal antiderivative.

$$\int \operatorname{Cos}[c+d\,x]^2\,(a+i\,a\operatorname{Tan}[c+d\,x])^n\,dx$$

Optimal (type 5, 56 leaves, 2 steps):

$$\frac{1}{4\,d\,(1-n)} i\,a\,\text{Hypergeometric2F1}\left[2,-1+n,n,\frac{1}{2}\,(1+i\operatorname{Tan}[c+d\,x])\right]\,(a+i\,a\operatorname{Tan}[c+d\,x])^{-1+n}$$

Result (type 5, 256 leaves):

$$-\frac{1}{d\,n\,(-1+n^2)} i\,2^{-3+n}\,e^{-2\,i\,(c+d\,n\,x)}\,(e^{i\,d\,x})^n\left(\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}\right)^n\left(\left(e^{2\,i\,d\,(-1+n)\,x}+e^{2\,i\,(c+d\,n\,x)}\right)n\,(1+n)+\right.$$
$$2\,e^{2\,i\,(c+d\,n\,x)}\,(1+e^{2\,i\,(c+d\,x)})^n\,(-1+n^2)\,\text{Hypergeometric2F1}\left[n,n,1+n,-e^{2\,i\,(c+d\,x)}\right]+$$
$$\left.e^{2\,i\,(2\,c+d\,x+d\,n\,x)}\,(1+e^{2\,i\,(c+d\,x)})^n\,(-1+n)\,n\,\text{Hypergeometric2F1}\left[n,1+n,2+n,-e^{2\,i\,(c+d\,x)}\right]\right)$$
$$\operatorname{Sec}[c+d\,x]^{-n}\,(\operatorname{Cos}[d\,x]+i\operatorname{Sin}[d\,x])^{-n}\,(a+i\,a\operatorname{Tan}[c+d\,x])^n$$

Problem 469: Unable to integrate problem.

$$\int \operatorname{Cos}[c+d\,x]^4\,(a+i\,a\operatorname{Tan}[c+d\,x])^n\,dx$$

Optimal (type 5, 60 leaves, 2 steps):

$$\frac{1}{8\,d\,(2-n)} i\,a^2\,\text{Hypergeometric2F1}\left[3,-2+n,-1+n,\frac{1}{2}\,(1+i\operatorname{Tan}[c+d\,x])\right]\,(a+i\,a\operatorname{Tan}[c+d\,x])^{-2+n}$$

Result (type 8, 26 leaves):

$$\int \operatorname{Cos}[c+d\,x]^4\,(a+i\,a\operatorname{Tan}[c+d\,x])^n\,dx$$

Problem 470: Unable to integrate problem.

$$\int \operatorname{Cos}[c+d\,x]^6\,(a+i\,a\operatorname{Tan}[c+d\,x])^n\,dx$$

Optimal (type 5, 60 leaves, 2 steps):

$$\frac{1}{16\,d\,(3-n)}$$
$$i\,a^3\,\text{Hypergeometric2F1}\left[4,-3+n,-2+n,\frac{1}{2}\,(1+i\operatorname{Tan}[c+d\,x])\right]\,(a+i\,a\operatorname{Tan}[c+d\,x])^{-3+n}$$

Result (type 8, 26 leaves):

$$\int \operatorname{Cos}[c+d\,x]^6\,(a+i\,a\operatorname{Tan}[c+d\,x])^n\,dx$$

Problem 474: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Cos}[c+d\,x]\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^n\,dx$$

Optimal (type 5, 85 leaves, 4 steps):

$$-\frac{1}{d}i\,2^{-\frac{1}{2}+n}\,\mathrm{Cos}[c+d\,x]\,\mathrm{Hypergeometric2F1}\left[-\frac{1}{2},\frac{3}{2}-n,\frac{1}{2},\frac{1}{2}\left(1-i\,\mathrm{Tan}[c+d\,x]\right)\right]\left(1+i\,\mathrm{Tan}[c+d\,x]\right)^{\frac{1}{2}-n}\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^n$$

Result (type 5, 195 leaves):

$$-\frac{1}{d\left(-1+4\,n^2\right)}i\,2^{-1+n}\left(e^{i\,d\,x}\right)^n\left(\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}\right)^{-1+n}\left(1+e^{2\,i\,(c+d\,x)}\right)^{-1+n}\left(\left(1+2\,n\right)\mathrm{Hypergeometric2F1}\left[-\frac{1}{2}+n,n,\frac{1}{2}+n,-e^{2\,i\,(c+d\,x)}\right]+e^{2\,i\,(c+d\,x)}\left(-1+2\,n\right)\mathrm{Hypergeometric2F1}\left[n,\frac{1}{2}+n,\frac{3}{2}+n,-e^{2\,i\,(c+d\,x)}\right]\right)\mathrm{Sec}[c+d\,x]^{-n}\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^{-n}\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^n$$

Problem 475: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Cos}[c+d\,x]^3\,\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^n\,dx$$

Optimal (type 5, 94 leaves, 4 steps):

$$-\frac{1}{3\,a\,d}i\,2^{-\frac{3}{2}+n}\,\mathrm{Cos}[c+d\,x]^3\,\mathrm{Hypergeometric2F1}\left[-\frac{3}{2},\frac{5}{2}-n,-\frac{1}{2},\frac{1}{2}\left(1-i\,\mathrm{Tan}[c+d\,x]\right)\right]\left(1+i\,\mathrm{Tan}[c+d\,x]\right)^{\frac{1}{2}-n}\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^{1+n}$$

Result (type 5, 321 leaves):

$$-\frac{1}{d\left(9-40\,n^2+16\,n^4\right)}i\,2^{-3+n}\,e^{-3\,i\,(c+d\,x)}\left(e^{i\,d\,x}\right)^n\left(\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}\right)^n\left(1+e^{2\,i\,(c+d\,x)}\right)^n\left(\left(-3-2\,n+12\,n^2+8\,n^3\right)\mathrm{Hypergeometric2F1}\left[-\frac{3}{2}+n,n,-\frac{1}{2}+n,-e^{2\,i\,(c+d\,x)}\right]+e^{2\,i\,(c+d\,x)}\left(-3+2\,n\right)\left(3\left(3+8\,n+4\,n^2\right)\mathrm{Hypergeometric2F1}\left[-\frac{1}{2}+n,n,\frac{1}{2}+n,-e^{2\,i\,(c+d\,x)}\right]+e^{2\,i\,(c+d\,x)}\left(-1+2\,n\right)\left(\left(9+6\,n\right)\mathrm{Hypergeometric2F1}\left[n,\frac{1}{2}+n,\frac{3}{2}+n,-e^{2\,i\,(c+d\,x)}\right]+e^{2\,i\,(c+d\,x)}\left(1+2\,n\right)\mathrm{Hypergeometric2F1}\left[n,\frac{3}{2}+n,\frac{5}{2}+n,-e^{2\,i\,(c+d\,x)}\right]\right)\right)\right)\mathrm{Sec}[c+d\,x]^{-n}\left(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]\right)^{-n}\left(a+i\,a\,\mathrm{Tan}[c+d\,x]\right)^n$$

Problem 476: Unable to integrate problem.

$$\int \text{Cos}[c+d\,x]^5\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^n\,dx$$

Optimal (type 5, 94 leaves, 4 steps):

$$-\frac{1}{5\,a^2\,d}i\,2^{-\frac{5}{2}+n}\,\text{Cos}[c+d\,x]^5\,\text{Hypergeometric2F1}\left[-\frac{5}{2},\frac{7}{2}-n,-\frac{3}{2},\frac{1}{2}\left(1-i\,\text{Tan}[c+d\,x]\right)\right]$$
$$\left(1+i\,\text{Tan}[c+d\,x]\right)^{\frac{1}{2}-n}\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^{2+n}$$

Result (type 8, 26 leaves):

$$\int \text{Cos}[c+d\,x]^5\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^n\,dx$$

Problem 497: Result more than twice size of optimal antiderivative.

$$\int \left(e\,\text{Sec}[c+d\,x]\right)^{-2\,n}\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^n\,dx$$

Optimal (type 5, 65 leaves, 3 steps):

$$-\frac{1}{2\,d\,n}$$
$$i\,\text{Hypergeometric2F1}\left[1,-n,1-n,\frac{1}{2}\left(1-i\,\text{Tan}[c+d\,x]\right)\right]\,\left(e\,\text{Sec}[c+d\,x]\right)^{-2\,n}\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^n$$

Result (type 5, 152 leaves):

$$-\frac{1}{d\,n}$$
$$i\,2^{-1-n}\,\left(e^{i\,d\,x}\right)^n\,\left(1+e^{-2\,i\,(c+d\,x)}\right)^{-n}\,\left(\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}\right)^{-n}\,\text{Hypergeometric2F1}\left[-n,-n,1-n,-e^{-2\,i\,(c+d\,x)}\right]$$
$$\text{Sec}[c+d\,x]^n\,\left(e\,\text{Sec}[c+d\,x]\right)^{-2\,n}\,\left(\text{Cos}[d\,x]+i\,\text{Sin}[d\,x]\right)^{-n}\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^n$$

Problem 498: Result more than twice size of optimal antiderivative.

$$\int \left(e\,\text{Sec}[c+d\,x]\right)^{-1-2\,n}\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^n\,dx$$

Optimal (type 5, 95 leaves, 5 steps):

$$\frac{1}{d}i\,2^{-\frac{1}{2}-n}\,\text{Hypergeometric2F1}\left[-\frac{1}{2},\frac{1}{2}\left(3+2\,n\right),\frac{1}{2},\frac{1}{2}\left(1+i\,\text{Tan}[c+d\,x]\right)\right]$$
$$\left(e\,\text{Sec}[c+d\,x]\right)^{-1-2\,n}\,\left(1-i\,\text{Tan}[c+d\,x]\right)^{\frac{1}{2}+n}\,\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^n$$

Result (type 5, 192 leaves):

$$\frac{1}{d} i\, 2^{-1-n} \left(e^{i d x}\right)^n \left(\frac{e^{i (c+d x)}}{1+e^{2 i (c+d x)}}\right)^{-1-n} \left(1+e^{2 i (c+d x)}\right)^{-1-n} \left(\text{Hypergeometric2F1}\left[-\frac{1}{2}, -n, \frac{1}{2}, -e^{2 i (c+d x)}\right] - e^{2 i (c+d x)}\, \text{Hypergeometric2F1}\left[\frac{1}{2}, -n, \frac{3}{2}, -e^{2 i (c+d x)}\right]\right) \text{Sec}[c+d x]^{1+n} \left(e\, \text{Sec}[c+d x]\right)^{-1-2 n} \left(\text{Cos}[d x]+i\, \text{Sin}[d x]\right)^{-n} \left(a+i\, a\, \text{Tan}[c+d x]\right)^n$$

Problem 499: Result more than twice size of optimal antiderivative.

$$\int \left(e\, \text{Sec}[c+d x]\right)^{-2-2 n} \left(a+i\, a\, \text{Tan}[c+d x]\right)^n dx$$

Optimal (type 5, 74 leaves, 4 steps):

$$-\frac{1}{4 a d (1+n)} i\, \text{Hypergeometric2F1}\left[2, -1-n, -n, \frac{1}{2} \left(1-i\, \text{Tan}[c+d x]\right)\right] \left(e\, \text{Sec}[c+d x]\right)^{-2 (1+n)} \left(a+i\, a\, \text{Tan}[c+d x]\right)^{1+n}$$

Result (type 5, 335 leaves):

$$-\frac{1}{d e^2 n \left(-1+n^2\right)} i\, 2^{-3-n} e^{-2 i (c+d x)} \left(e^{i d x}\right)^n \left(1+e^{-2 i (c+d x)}\right)^{-n} \left(\frac{e^{i (c+d x)}}{1+e^{2 i (c+d x)}}\right)^{-n} \left(1+e^{2 i (c+d x)}\right)^{-n} \left(\left(1+e^{2 i (c+d x)}\right)^n n (1+n)\, \text{Hypergeometric2F1}\left[1-n, -n, 2-n, -e^{-2 i (c+d x)}\right] + e^{2 i (c+d x)} (-1+n) \left(\left(1+e^{-2 i (c+d x)}\right)^n \left(-1+\left(1+e^{2 i (c+d x)}\right)^n + e^{2 i (c+d x)} \left(1+e^{2 i (c+d x)}\right)^n\right) n + 2 \left(1+e^{2 i (c+d x)}\right)^n (1+n)\, \text{Hypergeometric2F1}\left[-n, -n, 1-n, -e^{-2 i (c+d x)}\right]\right)\right) \text{Sec}[c+d x]^n \left(e\, \text{Sec}[c+d x]\right)^{-2 n} \left(\text{Cos}[d x]+i\, \text{Sin}[d x]\right)^{-n} \left(a+i\, a\, \text{Tan}[c+d x]\right)^n$$

Problem 500: Result more than twice size of optimal antiderivative.

$$\int \left(e\, \text{Sec}[c+d x]\right)^{-3-2 n} \left(a+i\, a\, \text{Tan}[c+d x]\right)^n dx$$

Optimal (type 5, 97 leaves, 5 steps):

$$\frac{1}{3 d} i\, 2^{-\frac{3}{2}-n}\, \text{Hypergeometric2F1}\left[-\frac{3}{2}, \frac{1}{2} (5+2 n), -\frac{1}{2}, \frac{1}{2} \left(1+i\, \text{Tan}[c+d x]\right)\right] \left(e\, \text{Sec}[c+d x]\right)^{-3-2 n} \left(1-i\, \text{Tan}[c+d x]\right)^{\frac{3}{2}+n} \left(a+i\, a\, \text{Tan}[c+d x]\right)^n$$

Result (type 5, 273 leaves):

$$\frac{1}{3\,d} i\, 2^{-3-n}\, e^{-3\, i\, (c+d\, x)} \left(e^{i\, d\, x}\right)^n \left(\frac{e^{i\, (c+d\, x)}}{1+e^{2\, i\, (c+d\, x)}}\right)^{-n} \left(1+e^{2\, i\, (c+d\, x)}\right)^{-n} \left(\text{Hypergeometric2F1}\left[-\frac{3}{2}, -n, -\frac{1}{2}, -e^{2\, i\, (c+d\, x)}\right] + 9\, e^{2\, i\, (c+d\, x)}\, \text{Hypergeometric2F1}\left[-\frac{1}{2}, -n, \frac{1}{2}, -e^{2\, i\, (c+d\, x)}\right] - 9\, e^{4\, i\, (c+d\, x)}\, \text{Hypergeometric2F1}\left[\frac{1}{2}, -n, \frac{3}{2}, -e^{2\, i\, (c+d\, x)}\right] - e^{6\, i\, (c+d\, x)}\, \text{Hypergeometric2F1}\left[\frac{3}{2}, -n, \frac{5}{2}, -e^{2\, i\, (c+d\, x)}\right]\right) \text{Sec}[c+d\, x]^{3+n} \left(e\, \text{Sec}[c+d\, x]\right)^{-3-2\, n} \left(\text{Cos}[d\, x] + i\, \text{Sin}[d\, x]\right)^{-n} \left(a + i\, a\, \text{Tan}[c+d\, x]\right)^n$$

Problem 501: Result more than twice size of optimal antiderivative.

$$\int \left(d\, \text{Sec}[e+f\, x]\right)^{2\, n} \left(a + i\, a\, \text{Tan}[e+f\, x]\right)^{-2-n} dx$$

Optimal (type 5, 66 leaves, 4 steps):

$$\frac{1}{8\, a^2\, f\, n} i\, \text{Hypergeometric2F1}\left[3, n, 1+n, \frac{1}{2} \left(1 - i\, \text{Tan}[e+f\, x]\right)\right] \left(d\, \text{Sec}[e+f\, x]\right)^{2\, n} \left(a + i\, a\, \text{Tan}[e+f\, x]\right)^{-n}$$

Result (type 5, 257 leaves):

$$\frac{1}{f\, n\, (1+n)\, (2+n)} i\, 2^{-3+n}\, e^{-2\, i\, (e+2\, f\, x)} \left(e^{i\, f\, x}\right)^{-n} \left(1+e^{-2\, i\, (e+f\, x)}\right)^n \left(\frac{e^{i\, (e+f\, x)}}{1+e^{2\, i\, (e+f\, x)}}\right)^n \left(e^{4\, i\, (e+f\, x)} \left(2+3\, n+n^2\right) \text{Hypergeometric2F1}\left[n, n, 1+n, -e^{-2\, i\, (e+f\, x)}\right] + 2\, e^{2\, i\, (e+f\, x)}\, n\, (2+n)\, \text{Hypergeometric2F1}\left[n, 1+n, 2+n, -e^{-2\, i\, (e+f\, x)}\right] + n\, (1+n)\, \text{Hypergeometric2F1}\left[n, 2+n, 3+n, -e^{-2\, i\, (e+f\, x)}\right]\right) \text{Sec}[e+f\, x]^{2-n} \left(d\, \text{Sec}[e+f\, x]\right)^{2\, n} \left(\text{Cos}[f\, x] + i\, \text{Sin}[f\, x]\right)^{2+n} \left(a + i\, a\, \text{Tan}[e+f\, x]\right)^{-2-n}$$

Problem 502: Result more than twice size of optimal antiderivative.

$$\int \left(d\, \text{Sec}[e+f\, x]\right)^{2\, n} \left(a + i\, a\, \text{Tan}[e+f\, x]\right)^{-1-n} dx$$

Optimal (type 5, 66 leaves, 4 steps):

$$\frac{1}{4\, a\, f\, n} i\, \text{Hypergeometric2F1}\left[2, n, 1+n, \frac{1}{2} \left(1 - i\, \text{Tan}[e+f\, x]\right)\right] \left(d\, \text{Sec}[e+f\, x]\right)^{2\, n} \left(a + i\, a\, \text{Tan}[e+f\, x]\right)^{-n}$$

Result (type 5, 206 leaves):

$$\frac{1}{f\, n\, (1+n)} i\, 2^{-2+n}\, e^{-i\, (e+2\, f\, x)} \left(e^{i\, f\, x}\right)^{-n} \left(1+e^{-2\, i\, (e+f\, x)}\right)^n \left(\frac{e^{i\, (e+f\, x)}}{1+e^{2\, i\, (e+f\, x)}}\right)^n \left(e^{2\, i\, (e+f\, x)}\, (1+n)\, \text{Hypergeometric2F1}\left[n, n, 1+n, -e^{-2\, i\, (e+f\, x)}\right] + n\, \text{Hypergeometric2F1}\left[n, 1+n, 2+n, -e^{-2\, i\, (e+f\, x)}\right]\right) \text{Sec}[e+f\, x]^{1-n} \left(d\, \text{Sec}[e+f\, x]\right)^{2\, n} \left(\text{Cos}[f\, x] + i\, \text{Sin}[f\, x]\right)^{1+n} \left(a + i\, a\, \text{Tan}[e+f\, x]\right)^{-1-n}$$

Problem 503: Result more than twice size of optimal antiderivative.

$$\int (d\,\mathrm{Sec}[e+f\,x])^{2\,n}\,(a+\mathrm{i}\,a\,\mathrm{Tan}[e+f\,x])^{-n}\,dx$$

Optimal (type 5, 63 leaves, 3 steps):

$$\frac{1}{2\,f\,n}\mathrm{i}\,\mathrm{Hypergeometric2F1}\left[1,\,n,\,1+n,\,\frac{1}{2}\,(1-\mathrm{i}\,\mathrm{Tan}[e+f\,x])\right]\,(d\,\mathrm{Sec}[e+f\,x])^{2\,n}\,(a+\mathrm{i}\,a\,\mathrm{Tan}[e+f\,x])^{-n}$$

Result (type 5, 144 leaves):

$$\frac{1}{f\,n}\mathrm{i}\,2^{-1+n}\,\left(e^{\mathrm{i}\,f\,x}\right)^{-n}\,\left(1+e^{-2\,\mathrm{i}\,(e+f\,x)}\right)^{n}\,\left(\frac{e^{\mathrm{i}\,(e+f\,x)}}{1+e^{2\,\mathrm{i}\,(e+f\,x)}}\right)^{n}\,\mathrm{Hypergeometric2F1}\left[n,\,n,\,1+n,\,-e^{-2\,\mathrm{i}\,(e+f\,x)}\right]\,\mathrm{Sec}[e+f\,x]^{-n}\,(d\,\mathrm{Sec}[e+f\,x])^{2\,n}\,(\mathrm{Cos}[f\,x]+\mathrm{i}\,\mathrm{Sin}[f\,x])^{n}\,(a+\mathrm{i}\,a\,\mathrm{Tan}[e+f\,x])^{-n}$$

Problem 508: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Sec}[c+d\,x]^5\,(a+b\,\mathrm{Tan}[c+d\,x])\,dx$$

Optimal (type 3, 74 leaves, 4 steps):

$$\frac{3\,a\,\mathrm{ArcTanh}[\mathrm{Sin}[c+d\,x]]}{8\,d}+\frac{b\,\mathrm{Sec}[c+d\,x]^5}{5\,d}+\frac{3\,a\,\mathrm{Sec}[c+d\,x]\,\mathrm{Tan}[c+d\,x]}{8\,d}+\frac{a\,\mathrm{Sec}[c+d\,x]^3\,\mathrm{Tan}[c+d\,x]}{4\,d}$$

Result (type 3, 207 leaves):

$$-\frac{3\,a\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]}{8\,d}+\frac{3\,a\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]}{8\,d}+\frac{b\,\mathrm{Sec}[c+d\,x]^5}{5\,d}+\frac{a}{16\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4}+\frac{3\,a}{16\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}-\frac{a}{16\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4}-\frac{3\,a}{16\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}$$

Problem 512: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Sec}[c+d\,x]\,(a+b\,\mathrm{Tan}[c+d\,x])\,dx$$

Optimal (type 3, 24 leaves, 2 steps):

$$\frac{a\,\mathrm{ArcTanh}[\mathrm{Sin}[c+d\,x]]}{d}+\frac{b\,\mathrm{Sec}[c+d\,x]}{d}$$

Result (type 3, 81 leaves):

$$-\frac{a \operatorname{Log}\left[\operatorname{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]-\operatorname{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right]}{d}+\frac{a \operatorname{Log}\left[\operatorname{Cos}\left[\frac{c}{2}+\frac{d x}{2}\right]+\operatorname{Sin}\left[\frac{c}{2}+\frac{d x}{2}\right]\right]}{d}+\frac{b \operatorname{Sec}[c+d x]}{d}$$

Problem 520: Result more than twice size of optimal antiderivative.

$$\int \operatorname{Sec}[c+d x]^2 (a+b \operatorname{Tan}[c+d x])^2 \, dx$$

Optimal (type 3, 22 leaves, 2 steps):

$$\frac{(a+b \operatorname{Tan}[c+d x])^3}{3 b d}$$

Result (type 3, 56 leaves):

$$\frac{1}{6 d}\operatorname{Sec}[c+d x]^2 \left(6 a b+\left(3 a^2+b^2+\left(3 a^2-b^2\right) \operatorname{Cos}[2 (c+d x)]\right) \operatorname{Tan}[c+d x]\right)$$

Problem 523: Result more than twice size of optimal antiderivative.

$$\int \operatorname{Sec}[c+d x]^7 (a+b \operatorname{Tan}[c+d x])^2 \, dx$$

Optimal (type 3, 163 leaves, 6 steps):

$$\frac{5 \left(8 a^2-b^2\right) \operatorname{ArcTanh}[\operatorname{Sin}[c+d x]]}{128 d}+\frac{9 a b \operatorname{Sec}[c+d x]^7}{56 d}+\frac{5 \left(8 a^2-b^2\right) \operatorname{Sec}[c+d x] \operatorname{Tan}[c+d x]}{128 d}+\frac{5 \left(8 a^2-b^2\right) \operatorname{Sec}[c+d x]^3 \operatorname{Tan}[c+d x]}{192 d}+\frac{\left(8 a^2-b^2\right) \operatorname{Sec}[c+d x]^5 \operatorname{Tan}[c+d x]}{48 d}+\frac{b \operatorname{Sec}[c+d x]^7 (a+b \operatorname{Tan}[c+d x])}{8 d}$$

Result (type 3, 1521 leaves):

$$\frac{5 a b \operatorname{Cos}[c+d x]^2 (a+b \operatorname{Tan}[c+d x])^2}{56 d (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2}-\left(5 \left(8 a^2-b^2\right) \operatorname{Cos}[c+d x]^2 \operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2} (c+d x)\right]-\operatorname{Sin}\left[\frac{1}{2} (c+d x)\right]\right] (a+b \operatorname{Tan}[c+d x])^2\right) \Big/ \left(128 d (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2\right)+\left(5 \left(8 a^2-b^2\right) \operatorname{Cos}[c+d x]^2 \operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2} (c+d x)\right]+\operatorname{Sin}\left[\frac{1}{2} (c+d x)\right]\right] (a+b \operatorname{Tan}[c+d x])^2\right) \Big/ \left(128 d (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2\right)+\left(b^2 \operatorname{Cos}[c+d x]^2 (a+b \operatorname{Tan}[c+d x])^2\right) \Big/ \left(128 d \left(\operatorname{Cos}\left[\frac{1}{2} (c+d x)\right]-\operatorname{Sin}\left[\frac{1}{2} (c+d x)\right]\right)^8 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2\right)+\left(\left(28 a^2+24 a b+7 b^2\right) \operatorname{Cos}[c+d x]^2 (a+b \operatorname{Tan}[c+d x])^2\right) \Big/ \left(1344 d \left(\operatorname{Cos}\left[\frac{1}{2} (c+d x)\right]-\operatorname{Sin}\left[\frac{1}{2} (c+d x)\right]\right)^6 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2\right)+$$

$$\left(\left(112 a^2+64 a b-7 b^2\right) \text{Cos}[c+d x]^2 (a+b \text{Tan}[c+d x])^2\right) \Big/ \left(1792 d \left(\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right)^4 (a \text{Cos}[c+d x]+b \text{Sin}[c+d x])^2\right)+$$

$$\left(5 \left(56 a^2+16 a b-7 b^2\right) \text{Cos}[c+d x]^2 (a+b \text{Tan}[c+d x])^2\right) \Big/ \left(1792 d \left(\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right)^2 (a \text{Cos}[c+d x]+b \text{Sin}[c+d x])^2\right)+$$

$$\left(a b \text{Cos}[c+d x]^2 \text{Sin}\left[\frac{1}{2} (c+d x)\right] (a+b \text{Tan}[c+d x])^2\right) \Big/ \left(28 d \left(\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right)^7 (a \text{Cos}[c+d x]+b \text{Sin}[c+d x])^2\right)+$$

$$\left(a b \text{Cos}[c+d x]^2 \text{Sin}\left[\frac{1}{2} (c+d x)\right] (a+b \text{Tan}[c+d x])^2\right) \Big/ \left(14 d \left(\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right)^5 (a \text{Cos}[c+d x]+b \text{Sin}[c+d x])^2\right)+$$

$$\left(5 a b \text{Cos}[c+d x]^2 \text{Sin}\left[\frac{1}{2} (c+d x)\right] (a+b \text{Tan}[c+d x])^2\right) \Big/ \left(56 d \left(\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right)^3 (a \text{Cos}[c+d x]+b \text{Sin}[c+d x])^2\right)+$$

$$\left(5 a b \text{Cos}[c+d x]^2 \text{Sin}\left[\frac{1}{2} (c+d x)\right] (a+b \text{Tan}[c+d x])^2\right) \Big/ \left(56 d \left(\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right) (a \text{Cos}[c+d x]+b \text{Sin}[c+d x])^2\right)-$$

$$\left(b^2 \text{Cos}[c+d x]^2 (a+b \text{Tan}[c+d x])^2\right) \Big/ \left(128 d \left(\text{Cos}\left[\frac{1}{2} (c+d x)\right]+\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right)^8 (a \text{Cos}[c+d x]+b \text{Sin}[c+d x])^2\right)-$$

$$\left(a b \text{Cos}[c+d x]^2 \text{Sin}\left[\frac{1}{2} (c+d x)\right] (a+b \text{Tan}[c+d x])^2\right) \Big/ \left(28 d \left(\text{Cos}\left[\frac{1}{2} (c+d x)\right]+\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right)^7 (a \text{Cos}[c+d x]+b \text{Sin}[c+d x])^2\right)+$$

$$\left(\left(-28 a^2+24 a b-7 b^2\right) \text{Cos}[c+d x]^2 (a+b \text{Tan}[c+d x])^2\right) \Big/ \left(1344 d \left(\text{Cos}\left[\frac{1}{2} (c+d x)\right]+\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right)^6 (a \text{Cos}[c+d x]+b \text{Sin}[c+d x])^2\right)-$$

$$\left(a b \text{Cos}[c+d x]^2 \text{Sin}\left[\frac{1}{2} (c+d x)\right] (a+b \text{Tan}[c+d x])^2\right) \Big/ \left(14 d \left(\text{Cos}\left[\frac{1}{2} (c+d x)\right]+\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right)^5 (a \text{Cos}[c+d x]+b \text{Sin}[c+d x])^2\right)+$$

$$\left(\left(-112 a^2+64 a b+7 b^2\right) \text{Cos}[c+d x]^2 (a+b \text{Tan}[c+d x])^2\right) \Big/ \left(1792 d \left(\text{Cos}\left[\frac{1}{2} (c+d x)\right]+\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right)^4 (a \text{Cos}[c+d x]+b \text{Sin}[c+d x])^2\right)-$$

$$\left(5 a b \text{Cos}[c+d x]^2 \text{Sin}\left[\frac{1}{2} (c+d x)\right] (a+b \text{Tan}[c+d x])^2\right) \Big/$$

$$\left(56\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^3(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)-$$
$$\left(5\left(56\,a^2-16\,a\,b-7\,b^2\right)\text{Cos}[c+d\,x]^2(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(1792\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^2(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)-$$
$$\left(5\,a\,b\,\text{Cos}[c+d\,x]^2\,\text{Sin}\left[\frac{1}{2}(c+d\,x)\right](a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(56\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)$$

Problem 524: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]^5\,(a+b\,\text{Tan}[c+d\,x])^2\,dx$$

Optimal (type 3, 131 leaves, 5 steps):

$$\frac{\left(6\,a^2-b^2\right)\text{ArcTanh}[\text{Sin}[c+d\,x]]}{16\,d}+\frac{7\,a\,b\,\text{Sec}[c+d\,x]^5}{30\,d}+\frac{\left(6\,a^2-b^2\right)\text{Sec}[c+d\,x]\,\text{Tan}[c+d\,x]}{16\,d}+$$
$$\frac{\left(6\,a^2-b^2\right)\text{Sec}[c+d\,x]^3\,\text{Tan}[c+d\,x]}{24\,d}+\frac{b\,\text{Sec}[c+d\,x]^5\,(a+b\,\text{Tan}[c+d\,x])}{6\,d}$$

Result (type 3, 1175 leaves):

$$\frac{3\,a\,b\,\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^2}{20\,d\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2}+$$
$$\left(\left(-6\,a^2+b^2\right)\text{Cos}[c+d\,x]^2\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right](a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(16\,d\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$
$$\left(\left(6\,a^2-b^2\right)\text{Cos}[c+d\,x]^2\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right](a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(16\,d\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+\left(b^2\,\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(48\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$
$$\left(\left(5\,a^2+4\,a\,b\right)\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(80\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^4(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$
$$\left(\left(30\,a^2+12\,a\,b-5\,b^2\right)\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(160\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^2(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$
$$\left(a\,b\,\text{Cos}[c+d\,x]^2\,\text{Sin}\left[\frac{1}{2}(c+d\,x)\right](a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(10\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^5(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$

$$\left(3\,a\,b\,\text{Cos}[c+d\,x]^2\,\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(20\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^3\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$
$$\left(3\,a\,b\,\text{Cos}[c+d\,x]^2\,\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(20\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)-$$
$$\left(b^2\,\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(48\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^6\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)-$$
$$\left(a\,b\,\text{Cos}[c+d\,x]^2\,\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(10\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^5\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$
$$\left(\left(-5\,a^2+4\,a\,b\right)\,\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(80\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)-$$
$$\left(3\,a\,b\,\text{Cos}[c+d\,x]^2\,\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(20\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^3\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$
$$\left(\left(-30\,a^2+12\,a\,b+5\,b^2\right)\,\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(160\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)-$$
$$\left(3\,a\,b\,\text{Cos}[c+d\,x]^2\,\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(20\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)$$

Problem 525: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]^3\,(a+b\,\text{Tan}[c+d\,x])^2\,dx$$

Optimal (type 3, 99 leaves, 4 steps):

$$\frac{\left(4\,a^2-b^2\right)\,\text{ArcTanh}[\text{Sin}[c+d\,x]]}{8\,d}+\frac{5\,a\,b\,\text{Sec}[c+d\,x]^3}{12\,d}+$$
$$\frac{\left(4\,a^2-b^2\right)\,\text{Sec}[c+d\,x]\,\text{Tan}[c+d\,x]}{8\,d}+\frac{b\,\text{Sec}[c+d\,x]^3\,(a+b\,\text{Tan}[c+d\,x])}{4\,d}$$

Result (type 3, 851 leaves):

$$\frac{a\,b\,\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^2}{3\,d\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2}+$$
$$\left(\left(-4\,a^2+b^2\right)\text{Cos}[c+d\,x]^2\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right](a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(8\,d\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$
$$\left(\left(4\,a^2-b^2\right)\text{Cos}[c+d\,x]^2\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right](a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(8\,d\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+\left(b^2\,\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(16\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^4(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$
$$\left(\left(12\,a^2+8\,a\,b-3\,b^2\right)\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(48\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^2(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$
$$\left(a\,b\,\text{Cos}[c+d\,x]^2\,\text{Sin}\left[\frac{1}{2}(c+d\,x)\right](a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(3\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^3(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$
$$\left(a\,b\,\text{Cos}[c+d\,x]^2\,\text{Sin}\left[\frac{1}{2}(c+d\,x)\right](a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(3\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)-$$
$$\left(b^2\,\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(16\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^4(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)-$$
$$\left(a\,b\,\text{Cos}[c+d\,x]^2\,\text{Sin}\left[\frac{1}{2}(c+d\,x)\right](a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(3\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^3(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)+$$
$$\left(\left(-12\,a^2+8\,a\,b+3\,b^2\right)\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(48\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^2(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)-$$
$$\left(a\,b\,\text{Cos}[c+d\,x]^2\,\text{Sin}\left[\frac{1}{2}(c+d\,x)\right](a+b\,\text{Tan}[c+d\,x])^2\right)\Big/$$
$$\left(3\,d\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])^2\right)$$

Problem 526: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]\,(a+b\,\text{Tan}[c+d\,x])^2\,dx$$

Optimal (type 3, 65 leaves, 3 steps):

$$\frac{(2a^2-b^2)\,\text{ArcTanh}[\text{Sin}[c+d\,x]]}{2\,d}+\frac{3\,a\,b\,\text{Sec}[c+d\,x]}{2\,d}+\frac{b\,\text{Sec}[c+d\,x]\,(a+b\,\text{Tan}[c+d\,x])}{2\,d}$$

Result (type 3, 181 leaves):

$$\frac{1}{4\,d}\left(8\,a\,b+(-4\,a^2+2\,b^2)\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]+\right.$$
$$4\,a^2\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]-$$
$$2\,b^2\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]+\frac{b^2}{\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^2}+$$
$$\left.16\,a\,b\,\text{Sec}[c+d\,x]\,\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]^2-\frac{b^2}{\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^2}\right)$$

Problem 534: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^3\,dx$$

Optimal (type 3, 22 leaves, 2 steps):

$$\frac{(a+b\,\text{Tan}[c+d\,x])^4}{4\,b\,d}$$

Result (type 3, 79 leaves):

$$\frac{1}{8\,d}\text{Sec}[c+d\,x]^4$$
$$\left((6\,a^2\,b-2\,b^3)\,\text{Cos}[2\,(c+d\,x)]+a\,\left(6\,a\,b+2\,(a^2+b^2)\,\text{Sin}[2\,(c+d\,x)]+(a^2-b^2)\,\text{Sin}[4\,(c+d\,x)]\right)\right)$$

Problem 537: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]^5\,(a+b\,\text{Tan}[c+d\,x])^3\,dx$$

Optimal (type 3, 159 leaves, 6 steps):

$$\frac{3\,a\,(2\,a^2-b^2)\,\text{ArcTanh}[\text{Sin}[c+d\,x]]}{16\,d}+$$
$$\frac{3\,a\,(2\,a^2-b^2)\,\text{Sec}[c+d\,x]\,\text{Tan}[c+d\,x]}{16\,d}+\frac{a\,(2\,a^2-b^2)\,\text{Sec}[c+d\,x]^3\,\text{Tan}[c+d\,x]}{8\,d}+$$
$$\frac{b\,\text{Sec}[c+d\,x]^5\,(a+b\,\text{Tan}[c+d\,x])^2}{7\,d}+\frac{b\,\text{Sec}[c+d\,x]^5\,(4\,(8\,a^2-b^2)+15\,a\,b\,\text{Tan}[c+d\,x])}{70\,d}$$

Result (type 3, 637 leaves):

$$\frac{1}{35840\,d}\operatorname{Sec}[c+d\,x]^7\left(10752\,a^2\,b+1536\,b^3+3584\,\left(3\,a^2\,b-b^3\right)\operatorname{Cos}\left[2\,\left(c+d\,x\right)\right]-\right.$$
$$4410\,a^3\operatorname{Cos}\left[3\,\left(c+d\,x\right)\right]\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]-\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]+$$
$$2205\,a\,b^2\operatorname{Cos}\left[3\,\left(c+d\,x\right)\right]\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]-\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]-$$
$$1470\,a^3\operatorname{Cos}\left[5\,\left(c+d\,x\right)\right]\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]-\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]+$$
$$735\,a\,b^2\operatorname{Cos}\left[5\,\left(c+d\,x\right)\right]\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]-\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]-$$
$$210\,a^3\operatorname{Cos}\left[7\,\left(c+d\,x\right)\right]\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]-\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]+105\,a\,b^2\operatorname{Cos}\left[7\,\left(c+d\,x\right)\right]$$
$$\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]-\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]-3675\,a\,\left(2\,a^2-b^2\right)\operatorname{Cos}[c+d\,x]$$
$$\left(\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]-\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]-\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]+\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]\right)+$$
$$4410\,a^3\operatorname{Cos}\left[3\,\left(c+d\,x\right)\right]\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]+\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]-$$
$$2205\,a\,b^2\operatorname{Cos}\left[3\,\left(c+d\,x\right)\right]\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]+\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]+$$
$$1470\,a^3\operatorname{Cos}\left[5\,\left(c+d\,x\right)\right]\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]+\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]-$$
$$735\,a\,b^2\operatorname{Cos}\left[5\,\left(c+d\,x\right)\right]\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]+\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]+$$
$$210\,a^3\operatorname{Cos}\left[7\,\left(c+d\,x\right)\right]\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]+\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]-$$
$$105\,a\,b^2\operatorname{Cos}\left[7\,\left(c+d\,x\right)\right]\operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]+\operatorname{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]+$$
$$4340\,a^3\operatorname{Sin}\left[2\,\left(c+d\,x\right)\right]+6790\,a\,b^2\operatorname{Sin}\left[2\,\left(c+d\,x\right)\right]+2800\,a^3\operatorname{Sin}\left[4\,\left(c+d\,x\right)\right]-$$
$$\left.1400\,a\,b^2\operatorname{Sin}\left[4\,\left(c+d\,x\right)\right]+420\,a^3\operatorname{Sin}\left[6\,\left(c+d\,x\right)\right]-210\,a\,b^2\operatorname{Sin}\left[6\,\left(c+d\,x\right)\right]\right)$$

Problem 538: Result more than twice size of optimal antiderivative.

$$\int\operatorname{Sec}[c+d\,x]^3\,\left(a+b\operatorname{Tan}[c+d\,x]\right)^3\,dx$$

Optimal (type 3, 126 leaves, 5 steps):

$$\frac{a\,\left(4\,a^2-3\,b^2\right)\operatorname{ArcTanh}[\operatorname{Sin}[c+d\,x]]}{8\,d}+\frac{a\,\left(4\,a^2-3\,b^2\right)\operatorname{Sec}[c+d\,x]\operatorname{Tan}[c+d\,x]}{8\,d}+$$
$$\frac{b\operatorname{Sec}[c+d\,x]^3\,\left(a+b\operatorname{Tan}[c+d\,x]\right)^2}{5\,d}+\frac{b\operatorname{Sec}[c+d\,x]^3\,\left(8\,\left(6\,a^2-b^2\right)+21\,a\,b\operatorname{Tan}[c+d\,x]\right)}{60\,d}$$

Result (type 3, 464 leaves):

$$\frac{1}{1920\,d}\text{Sec}[c+d\,x]^5\left(960\,a^2\,b+64\,b^3+320\left(3\,a^2\,b-b^3\right)\text{Cos}\left[2\left(c+d\,x\right)\right]-\right.$$
$$300\,a^3\,\text{Cos}\left[3\left(c+d\,x\right)\right]\text{Log}\left[\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]-\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right]+$$
$$225\,a\,b^2\,\text{Cos}\left[3\left(c+d\,x\right)\right]\text{Log}\left[\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]-\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right]-$$
$$60\,a^3\,\text{Cos}\left[5\left(c+d\,x\right)\right]\text{Log}\left[\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]-\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right]+45\,a\,b^2\,\text{Cos}\left[5\left(c+d\,x\right)\right]$$
$$\text{Log}\left[\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]-\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right]-150\,a\left(4\,a^2-3\,b^2\right)\text{Cos}[c+d\,x]$$
$$\left(\text{Log}\left[\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]-\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right]-\text{Log}\left[\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right]\right)+$$
$$300\,a^3\,\text{Cos}\left[3\left(c+d\,x\right)\right]\text{Log}\left[\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right]-$$
$$225\,a\,b^2\,\text{Cos}\left[3\left(c+d\,x\right)\right]\text{Log}\left[\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right]+$$
$$60\,a^3\,\text{Cos}\left[5\left(c+d\,x\right)\right]\text{Log}\left[\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right]-$$
$$45\,a\,b^2\,\text{Cos}\left[5\left(c+d\,x\right)\right]\text{Log}\left[\text{Cos}\left[\frac{1}{2}\left(c+d\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\left(c+d\,x\right)\right]\right]+240\,a^3\,\text{Sin}\left[2\left(c+d\,x\right)\right]+$$
$$\left.540\,a\,b^2\,\text{Sin}\left[2\left(c+d\,x\right)\right]+120\,a^3\,\text{Sin}\left[4\left(c+d\,x\right)\right]-90\,a\,b^2\,\text{Sin}\left[4\left(c+d\,x\right)\right]\right)$$

Problem 539: Result more than twice size of optimal antiderivative.

$$\int \text{Sec}[c+d\,x]\,\left(a+b\,\text{Tan}[c+d\,x]\right)^3\,dx$$

Optimal (type 3, 91 leaves, 4 steps):

$$\frac{a\left(2\,a^2-3\,b^2\right)\text{ArcTanh}[\text{Sin}[c+d\,x]]}{2\,d}+$$
$$\frac{b\,\text{Sec}[c+d\,x]\,\left(a+b\,\text{Tan}[c+d\,x]\right)^2}{3\,d}+\frac{b\,\text{Sec}[c+d\,x]\,\left(4\left(4\,a^2-b^2\right)+5\,a\,b\,\text{Tan}[c+d\,x]\right)}{6\,d}$$

Result (type 3, 293 leaves):

$$\frac{1}{12\,d}\left(36\,a^2\,b-10\,b^3-6\,a\,\left(2\,a^2-3\,b^2\right)\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]+12\,a^3\right.$$
$$\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]-18\,a\,b^2\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]+$$
$$\frac{9\,a\,b^2}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}+\frac{b^3}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}+$$
$$2\,b\,\left(18\,a^2-b^2+2\,b^2\,\text{Cos}[c+d\,x]+\left(18\,a^2-5\,b^2\right)\,\text{Cos}[2\,(c+d\,x)]\right)\,\text{Sec}[c+d\,x]^3\,\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]^2-$$
$$\left.\frac{9\,a\,b^2}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}+\frac{b^3}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}\right)$$

Problem 547: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Cos}[c+d\,x]^2}{a+b\,\text{Tan}[c+d\,x]}\,dx$$

Optimal (type 3, 93 leaves, 7 steps):

$$\frac{a\,\left(a^2+3\,b^2\right)\,x}{2\,\left(a^2+b^2\right)^2}+\frac{b^3\,\text{Log}[a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x]]}{\left(a^2+b^2\right)^2\,d}+\frac{\text{Cos}[c+d\,x]^2\,\left(b+a\,\text{Tan}[c+d\,x]\right)}{2\,\left(a^2+b^2\right)\,d}$$

Result (type 3, 143 leaves):

$$\frac{1}{4\,\left(a^2+b^2\right)^2\,d}\left(2\,a^3\,c+6\,a\,b^2\,c+4\,i\,b^3\,c+2\,a^3\,d\,x+6\,a\,b^2\,d\,x+\right.$$
$$4\,i\,b^3\,d\,x-4\,i\,b^3\,\text{ArcTan}[\text{Tan}[c+d\,x]]+b\,\left(a^2+b^2\right)\,\text{Cos}[2\,(c+d\,x)]+$$
$$\left.2\,b^3\,\text{Log}\left[\left(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x]\right)^2\right]+a^3\,\text{Sin}[2\,(c+d\,x)]+a\,b^2\,\text{Sin}[2\,(c+d\,x)]\right)$$

Problem 549: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d\,x]^5}{a+b\,\text{Tan}[c+d\,x]}\,dx$$

Optimal (type 3, 140 leaves, 9 steps):

$$-\frac{a\,\left(2\,a^2+3\,b^2\right)\,\text{ArcTanh}[\text{Sin}[c+d\,x]]}{2\,b^4\,d}-\frac{\left(a^2+b^2\right)^{3/2}\,\text{ArcTanh}\left[\frac{\text{Cos}[c+d\,x]\,(b-a\,\text{Tan}[c+d\,x])}{\sqrt{a^2+b^2}}\right]}{b^4\,d}+$$
$$\frac{\left(a^2+b^2\right)\,\text{Sec}[c+d\,x]}{b^3\,d}+\frac{\text{Sec}[c+d\,x]^3}{3\,b\,d}-\frac{a\,\text{Sec}[c+d\,x]\,\text{Tan}[c+d\,x]}{2\,b^2\,d}$$

Result (type 3, 321 leaves):

$$\frac{1}{24 b^4 d}\left(48 \left(a^2+b^2\right)^{3/2} \text{ArcTanh}\left[\frac{-b+a \text{Tan}\left[\frac{1}{2} (c+d x)\right]}{\sqrt{a^2+b^2}}\right]+\text{Sec}[c+d x]^3 \left(12 a^2 b+20 b^3+12 b \left(a^2+b^2\right) \text{Cos}[2 (c+d x)]+6 a^3 \text{Cos}[3 (c+d x)] \text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right]+9 a b^2 \text{Cos}[3 (c+d x)] \text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right]+9 a \left(2 a^2+3 b^2\right) \text{Cos}[c+d x] \left(\text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]-\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right]-\text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]+\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right]\right)-6 a^3 \text{Cos}[3 (c+d x)] \text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]+\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right]-9 a b^2 \text{Cos}[3 (c+d x)] \text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]+\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right]-6 a b^2 \text{Sin}[2 (c+d x)]\right)\right)$$

Problem 554: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d x]^8}{(a+b \text{Tan}[c+d x])^2} \, dx$$

Optimal (type 3, 178 leaves, 3 steps):

$$-\frac{6 a \left(a^2+b^2\right)^2 \text{Log}[a+b \text{Tan}[c+d x]]}{b^7 d}+\frac{\left(5 a^4+9 a^2 b^2+3 b^4\right) \text{Tan}[c+d x]}{b^6 d}-\frac{a \left(2 a^2+3 b^2\right) \text{Tan}[c+d x]^2}{b^5 d}+\frac{\left(a^2+b^2\right) \text{Tan}[c+d x]^3}{b^4 d}-\frac{a \text{Tan}[c+d x]^4}{2 b^3 d}+\frac{\text{Tan}[c+d x]^5}{5 b^2 d}-\frac{\left(a^2+b^2\right)^3}{b^7 d (a+b \text{Tan}[c+d x])}$$

Result (type 3, 373 leaves):

$$\frac{1}{160 a b^7 d (a+b \text{Tan}[c+d x])}\Big(b \text{Sec}[c+d x]^6 \big(-70 a^5 b-60 a^3 b^3+50 a b^5-5 a b \left(27 a^4+32 a^2 b^2+b^4\right) \text{Cos}[2 (c+d x)]-2 \left(45 a^5 b+70 a^3 b^3+17 a b^5\right) \text{Cos}[4 (c+d x)]-25 a^5 b \text{Cos}[6 (c+d x)]-40 a^3 b^3 \text{Cos}[6 (c+d x)]-11 a b^5 \text{Cos}[6 (c+d x)]+120 a^6 \text{Sin}[4 (c+d x)]+200 a^4 b^2 \text{Sin}[4 (c+d x)]+76 a^2 b^4 \text{Sin}[4 (c+d x)]+20 b^6 \text{Sin}[4 (c+d x)]+30 a^6 \text{Sin}[6 (c+d x)]+55 a^4 b^2 \text{Sin}[6 (c+d x)]+26 a^2 b^4 \text{Sin}[6 (c+d x)]+5 b^6 \text{Sin}[6 (c+d x)]\big)+10 b \left(30 a^6+47 a^4 b^2+10 a^2 b^4+5 b^6\right) \text{Sec}[c+d x]^4 \text{Tan}[c+d x]+960 a^2 \left(a^2+b^2\right)^2 (\text{Log}[\text{Cos}[c+d x]]-\text{Log}[a \text{Cos}[c+d x]+b \text{Sin}[c+d x]]) (a+b \text{Tan}[c+d x])\Big)$$

Problem 558: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Cos}[c+d x]^2}{(a+b\,\text{Tan}[c+d x])^2}\,dx$$

Optimal (type 3, 152 leaves, 7 steps):

$$\frac{\left(a^4+6 a^2 b^2-3 b^4\right) x}{2 \left(a^2+b^2\right)^3}+\frac{4 a b^3 \,\text{Log}[a\,\text{Cos}[c+d x]+b\,\text{Sin}[c+d x]]}{\left(a^2+b^2\right)^3 d}+\frac{b \left(a^2-3 b^2\right)}{2 \left(a^2+b^2\right)^2 d \left(a+b\,\text{Tan}[c+d x]\right)}+\frac{\text{Cos}[c+d x]^2 \left(b+a\,\text{Tan}[c+d x]\right)}{2 \left(a^2+b^2\right) d \left(a+b\,\text{Tan}[c+d x]\right)}$$

Result (type 3, 331 leaves):

$$\frac{1}{4 a \left(a^2+b^2\right)^3 d \left(a+b\,\text{Tan}[c+d x]\right)}\Big(2 a^6 c+12 a^4 b^2 c-6 a^2 b^4 c+2 a^6 d x+12 a^4 b^2 d x-6 a^2 b^4 d x+16 a^3 b^3 \,\text{Log}[a\,\text{Cos}[c+d x]+b\,\text{Sin}[c+d x]]+2 a b \left(a^4-b^4\right) \text{Sin}[c+d x]^2+a^6 \,\text{Sin}[2 (c+d x)]-a^2 b^4 \,\text{Sin}[2 (c+d x)]+4 a^2 b^4 \,\text{Tan}[c+d x]+4 b^6 \,\text{Tan}[c+d x]+2 a^5 b c\,\text{Tan}[c+d x]+12 a^3 b^3 c\,\text{Tan}[c+d x]-6 a b^5 c\,\text{Tan}[c+d x]+2 a^5 b d x\,\text{Tan}[c+d x]+12 a^3 b^3 d x\,\text{Tan}[c+d x]-6 a b^5 d x\,\text{Tan}[c+d x]+16 a^2 b^4 \,\text{Log}[a\,\text{Cos}[c+d x]+b\,\text{Sin}[c+d x]]\,\text{Tan}[c+d x]+2 a^2 b \left(a^2+b^2\right) \text{Cos}[2 (c+d x)] \left(a+b\,\text{Tan}[c+d x]\right)\Big)$$

Problem 559: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{\text{Cos}[c+d x]^4}{(a+b\,\text{Tan}[c+d x])^2}\,dx$$

Optimal (type 3, 235 leaves, 8 steps):

$$\frac{3 \left(a^6+5 a^4 b^2+15 a^2 b^4-5 b^6\right) x}{8 \left(a^2+b^2\right)^4}+\frac{6 a b^5 \,\text{Log}[a\,\text{Cos}[c+d x]+b\,\text{Sin}[c+d x]]}{\left(a^2+b^2\right)^4 d}+\frac{3 b \left(a^2-b^2\right) \left(a^2+5 b^2\right)}{8 \left(a^2+b^2\right)^3 d \left(a+b\,\text{Tan}[c+d x]\right)}+\frac{\text{Cos}[c+d x]^4 \left(b+a\,\text{Tan}[c+d x]\right)}{4 \left(a^2+b^2\right) d \left(a+b\,\text{Tan}[c+d x]\right)}-\frac{\text{Cos}[c+d x]^2 \left(b \left(a^2-5 b^2\right)-3 a \left(a^2+3 b^2\right) \text{Tan}[c+d x]\right)}{8 \left(a^2+b^2\right)^2 d \left(a+b\,\text{Tan}[c+d x]\right)}$$

Result (type 3, 737 leaves):

$$\frac{1}{64\,a\,\left(a^2+b^2\right)^4\,d\,\left(a+b\,\mathrm{Tan}[c+d\,x]\right)}\left(13\,a^7\,b+59\,a^5\,b^3+15\,a^3\,b^5-31\,a\,b^7+24\,a^8\,c+120\,a^6\,b^2\,c+360\,a^4\,b^4\,c+384\,\mathrm{i}\,a^3\,b^5\,c-120\,a^2\,b^6\,c+24\,a^8\,d\,x+120\,a^6\,b^2\,d\,x+360\,a^4\,b^4\,d\,x+384\,\mathrm{i}\,a^3\,b^5\,d\,x-120\,a^2\,b^6\,d\,x+6\,a\,b\,\left(a^2+b^2\right)^2\,\left(a^2+5\,b^2\right)\,\mathrm{Cos}[2\,(c+d\,x)]+192\,a^3\,b^5\,\mathrm{Log}\left[\left(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x]\right)^2\right]+a^7\,b\,\mathrm{Cos}[5\,(c+d\,x)]\,\mathrm{Sec}[c+d\,x]+3\,a^5\,b^3\,\mathrm{Cos}[5\,(c+d\,x)]\,\mathrm{Sec}[c+d\,x]+3\,a^3\,b^5\,\mathrm{Cos}[5\,(c+d\,x)]\,\mathrm{Sec}[c+d\,x]+a\,b^7\,\mathrm{Cos}[5\,(c+d\,x)]\,\mathrm{Sec}[c+d\,x]+9\,a^8\,\mathrm{Sec}[c+d\,x]\,\mathrm{Sin}[3\,(c+d\,x)]+39\,a^6\,b^2\,\mathrm{Sec}[c+d\,x]\,\mathrm{Sin}[3\,(c+d\,x)]+51\,a^4\,b^4\,\mathrm{Sec}[c+d\,x]\,\mathrm{Sin}[3\,(c+d\,x)]+21\,a^2\,b^6\,\mathrm{Sec}[c+d\,x]\,\mathrm{Sin}[3\,(c+d\,x)]+a^8\,\mathrm{Sec}[c+d\,x]\,\mathrm{Sin}[5\,(c+d\,x)]+3\,a^6\,b^2\,\mathrm{Sec}[c+d\,x]\,\mathrm{Sin}[5\,(c+d\,x)]+3\,a^4\,b^4\,\mathrm{Sec}[c+d\,x]\,\mathrm{Sin}[5\,(c+d\,x)]+a^2\,b^6\,\mathrm{Sec}[c+d\,x]\,\mathrm{Sin}[5\,(c+d\,x)]+8\,a^8\,\mathrm{Tan}[c+d\,x]+24\,a^6\,b^2\,\mathrm{Tan}[c+d\,x]-40\,a^4\,b^4\,\mathrm{Tan}[c+d\,x]+8\,a^2\,b^6\,\mathrm{Tan}[c+d\,x]+64\,b^8\,\mathrm{Tan}[c+d\,x]+24\,a^7\,b\,c\,\mathrm{Tan}[c+d\,x]+120\,a^5\,b^3\,c\,\mathrm{Tan}[c+d\,x]+360\,a^3\,b^5\,c\,\mathrm{Tan}[c+d\,x]+384\,\mathrm{i}\,a^2\,b^6\,c\,\mathrm{Tan}[c+d\,x]-120\,a\,b^7\,c\,\mathrm{Tan}[c+d\,x]+24\,a^7\,b\,d\,x\,\mathrm{Tan}[c+d\,x]+120\,a^5\,b^3\,d\,x\,\mathrm{Tan}[c+d\,x]+360\,a^3\,b^5\,d\,x\,\mathrm{Tan}[c+d\,x]+384\,\mathrm{i}\,a^2\,b^6\,d\,x\,\mathrm{Tan}[c+d\,x]-120\,a\,b^7\,d\,x\,\mathrm{Tan}[c+d\,x]+192\,a^2\,b^6\,\mathrm{Log}\left[\left(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x]\right)^2\right]\,\mathrm{Tan}[c+d\,x]-384\,\mathrm{i}\,a^2\,b^5\,\mathrm{ArcTan}[\mathrm{Tan}[c+d\,x]]\,\left(a+b\,\mathrm{Tan}[c+d\,x]\right)\right)$$

Problem 560: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\frac{\mathrm{Sec}[c+d\,x]^7}{\left(a+b\,\mathrm{Tan}[c+d\,x]\right)^2}\,dx$$

Optimal (type 3, 235 leaves, 8 steps):

$$\frac{5\,\left(8\,a^4+12\,a^2\,b^2+3\,b^4\right)\,\mathrm{ArcSinh}[\mathrm{Tan}[c+d\,x]]\,\mathrm{Sec}[c+d\,x]}{8\,b^6\,d\,\sqrt{\mathrm{Sec}[c+d\,x]^2}}+\frac{5\,a\,\left(a^2+b^2\right)^{3/2}\,\mathrm{ArcTanh}\left[\frac{b-a\,\mathrm{Tan}[c+d\,x]}{\sqrt{a^2+b^2}\,\sqrt{\mathrm{Sec}[c+d\,x]^2}}\right]\,\mathrm{Sec}[c+d\,x]}{b^6\,d\,\sqrt{\mathrm{Sec}[c+d\,x]^2}}-\frac{5\,\mathrm{Sec}[c+d\,x]^3\,\left(4\,a-3\,b\,\mathrm{Tan}[c+d\,x]\right)}{12\,b^3\,d}-\frac{\mathrm{Sec}[c+d\,x]^5}{b\,d\,\left(a+b\,\mathrm{Tan}[c+d\,x]\right)}-\frac{5\,\mathrm{Sec}[c+d\,x]\,\left(8\,a\,\left(a^2+b^2\right)-b\,\left(4\,a^2+3\,b^2\right)\,\mathrm{Tan}[c+d\,x]\right)}{8\,b^5\,d}$$

Result (type 3, 1152 leaves):

$$-\frac{(a-\mathrm{i}\,b)^2\,(a+\mathrm{i}\,b)^2\,\mathrm{Sec}[c+d\,x]^2\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])}{b^5\,d\,(a+b\,\mathrm{Tan}[c+d\,x])^2}-$$

$$\frac{a\,(12\,a^2+13\,b^2)\,\mathrm{Sec}[c+d\,x]^2\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2}{3\,b^5\,d\,(a+b\,\mathrm{Tan}[c+d\,x])^2}+$$

$$\left(10\,\mathrm{i}\,a\,(a+\mathrm{i}\,b)\,(\mathrm{i}\,a+b)\,\sqrt{a^2+b^2}\,\mathrm{ArcTanh}\left[\frac{\sqrt{a^2+b^2}\,\left(-b\,\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+a\,\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)}{a^2\,\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+b^2\,\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]}\right]\right.$$

$$\left.\mathrm{Sec}[c+d\,x]^2\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2\right)\Big/\left(b^6\,d\,(a+b\,\mathrm{Tan}[c+d\,x])^2\right)-$$

$$\left(5\,(8\,a^4+12\,a^2\,b^2+3\,b^4)\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]\,\mathrm{Sec}[c+d\,x]^2\right.$$

$$\left.(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2\right)\Big/\left(8\,b^6\,d\,(a+b\,\mathrm{Tan}[c+d\,x])^2\right)+$$

$$\left(5\,(8\,a^4+12\,a^2\,b^2+3\,b^4)\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]\,\mathrm{Sec}[c+d\,x]^2\right.$$

$$\left.(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2\right)\Big/\left(8\,b^6\,d\,(a+b\,\mathrm{Tan}[c+d\,x])^2\right)+$$

$$\frac{\mathrm{Sec}[c+d\,x]^2\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2}{16\,b^2\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4\,(a+b\,\mathrm{Tan}[c+d\,x])^2}+$$

$$\frac{(36\,a^2-8\,a\,b+21\,b^2)\,\mathrm{Sec}[c+d\,x]^2\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2}{48\,b^4\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2\,(a+b\,\mathrm{Tan}[c+d\,x])^2}-$$

$$\frac{a\,\mathrm{Sec}[c+d\,x]^2\,\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2}{3\,b^3\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^3\,(a+b\,\mathrm{Tan}[c+d\,x])^2}-$$

$$\frac{\mathrm{Sec}[c+d\,x]^2\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2}{16\,b^2\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4\,(a+b\,\mathrm{Tan}[c+d\,x])^2}+$$

$$\frac{a\,\mathrm{Sec}[c+d\,x]^2\,\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2}{3\,b^3\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^3\,(a+b\,\mathrm{Tan}[c+d\,x])^2}+$$

$$\frac{(-36\,a^2-8\,a\,b-21\,b^2)\,\mathrm{Sec}[c+d\,x]^2\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2}{48\,b^4\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2\,(a+b\,\mathrm{Tan}[c+d\,x])^2}+\left(\mathrm{Sec}[c+d\,x]^2\right.$$

$$\left.\left(-12\,a^3\,\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]-13\,a\,b^2\,\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2\right)\Big/$$

$$\left(3\,b^5\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\,(a+b\,\mathrm{Tan}[c+d\,x])^2\right)+\left(\mathrm{Sec}[c+d\,x]^2\right.$$

$$\left.\left(12\,a^3\,\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]+13\,a\,b^2\,\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2\right)\Big/$$

$$\left(3\,b^5\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\,(a+b\,\mathrm{Tan}[c+d\,x])^2\right)$$

Problem 561: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{\text{Sec}[c+d\,x]^5}{\left(a+b\,\text{Tan}[c+d\,x]\right)^2}\,dx$$

Optimal (type 3, 176 leaves, 7 steps):

$$\frac{3\left(2\,a^2+b^2\right)\text{ArcSinh}[\text{Tan}[c+d\,x]]\,\text{Sec}[c+d\,x]}{2\,b^4\,d\,\sqrt{\text{Sec}[c+d\,x]^2}}+\frac{3\,a\,\sqrt{a^2+b^2}\,\text{ArcTanh}\left[\frac{b-a\,\text{Tan}[c+d\,x]}{\sqrt{a^2+b^2}\,\sqrt{\text{Sec}[c+d\,x]^2}}\right]\text{Sec}[c+d\,x]}{b^4\,d\,\sqrt{\text{Sec}[c+d\,x]^2}}-\frac{3\,\text{Sec}[c+d\,x]\,\left(2\,a-b\,\text{Tan}[c+d\,x]\right)}{2\,b^3\,d}-\frac{\text{Sec}[c+d\,x]^3}{b\,d\,\left(a+b\,\text{Tan}[c+d\,x]\right)}$$

Result (type 3, 709 leaves):

$$-\frac{(a-i b)(a+i b) \operatorname{Sec}[c+d x]^2 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])}{b^3 d (a+b \operatorname{Tan}[c+d x])^2}-$$

$$\frac{2 a \operatorname{Sec}[c+d x]^2 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2}{b^3 d (a+b \operatorname{Tan}[c+d x])^2}-$$

$$\left(6 a \sqrt{a^2+b^2} \operatorname{ArcTanh}\left[\frac{\sqrt{a^2+b^2}\left(-b \operatorname{Cos}\left[\frac{1}{2}(c+d x)\right]+a \operatorname{Sin}\left[\frac{1}{2}(c+d x)\right]\right)}{a^2 \operatorname{Cos}\left[\frac{1}{2}(c+d x)\right]+b^2 \operatorname{Cos}\left[\frac{1}{2}(c+d x)\right]}\right]\right.$$

$$\left.\operatorname{Sec}[c+d x]^2 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2\right) \Big/ \left(b^4 d (a+b \operatorname{Tan}[c+d x])^2\right)-$$

$$\left(3 (2 a^2+b^2) \operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}(c+d x)\right]-\operatorname{Sin}\left[\frac{1}{2}(c+d x)\right]\right] \operatorname{Sec}[c+d x]^2\right.$$

$$\left.(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2\right) \Big/ \left(2 b^4 d (a+b \operatorname{Tan}[c+d x])^2\right)+$$

$$\left(3 (2 a^2+b^2) \operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2}(c+d x)\right]+\operatorname{Sin}\left[\frac{1}{2}(c+d x)\right]\right] \operatorname{Sec}[c+d x]^2\right.$$

$$\left.(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2\right) \Big/ \left(2 b^4 d (a+b \operatorname{Tan}[c+d x])^2\right)+$$

$$\frac{\operatorname{Sec}[c+d x]^2 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2}{4 b^2 d \left(\operatorname{Cos}\left[\frac{1}{2}(c+d x)\right]-\operatorname{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^2 (a+b \operatorname{Tan}[c+d x])^2}-$$

$$\frac{2 a \operatorname{Sec}[c+d x]^2 \operatorname{Sin}\left[\frac{1}{2}(c+d x)\right] (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2}{b^3 d \left(\operatorname{Cos}\left[\frac{1}{2}(c+d x)\right]-\operatorname{Sin}\left[\frac{1}{2}(c+d x)\right]\right) (a+b \operatorname{Tan}[c+d x])^2}-$$

$$\frac{\operatorname{Sec}[c+d x]^2 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2}{4 b^2 d \left(\operatorname{Cos}\left[\frac{1}{2}(c+d x)\right]+\operatorname{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^2 (a+b \operatorname{Tan}[c+d x])^2}+$$

$$\frac{2 a \operatorname{Sec}[c+d x]^2 \operatorname{Sin}\left[\frac{1}{2}(c+d x)\right] (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2}{b^3 d \left(\operatorname{Cos}\left[\frac{1}{2}(c+d x)\right]+\operatorname{Sin}\left[\frac{1}{2}(c+d x)\right]\right) (a+b \operatorname{Tan}[c+d x])^2}$$

Problem 566: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{\operatorname{Sec}[c+d x]^8}{(a+b \operatorname{Tan}[c+d x])^3} \, dx$$

Optimal (type 3, 185 leaves, 3 steps):

$$\frac{3\left(a^2+b^2\right)\left(5a^2+b^2\right)\operatorname{Log}[a+b\operatorname{Tan}[c+dx]]}{b^7 d}-\frac{a\left(10a^2+9b^2\right)\operatorname{Tan}[c+dx]}{b^6 d}+\frac{3\left(2a^2+b^2\right)\operatorname{Tan}[c+dx]^2}{2b^5 d}-\frac{a\operatorname{Tan}[c+dx]^3}{b^4 d}+\frac{\operatorname{Tan}[c+dx]^4}{4b^3 d}-\frac{\left(a^2+b^2\right)^3}{2b^7 d\left(a+b\operatorname{Tan}[c+dx]\right)^2}+\frac{6a\left(a^2+b^2\right)^2}{b^7 d\left(a+b\operatorname{Tan}[c+dx]\right)}$$

Result (type 3, 1677 leaves):

$$-\left(\left(3\left(5a^4+6a^2b^2+b^4\right)\operatorname{Log}[\operatorname{Cos}[c+dx]]\operatorname{Sec}[c+dx]^3\left(a\operatorname{Cos}[c+dx]+b\operatorname{Sin}[c+dx]\right)^3\right)\Big/\left(b^7 d\left(a+b\operatorname{Tan}[c+dx]\right)^3\right)\right)+$$
$$\left(3\left(5a^4+6a^2b^2+b^4\right)\operatorname{Log}[a\operatorname{Cos}[c+dx]+b\operatorname{Sin}[c+dx]]\operatorname{Sec}[c+dx]^3\left(a\operatorname{Cos}[c+dx]+b\operatorname{Sin}[c+dx]\right)^3\right)\Big/\left(b^7 d\left(a+b\operatorname{Tan}[c+dx]\right)^3\right)+$$
$$\frac{1}{672a^2b^6\left(7a^4+14a^2b^2-9b^4\right)d\left(a+b\operatorname{Tan}[c+dx]\right)^3}$$
$$\operatorname{Sec}[c+dx]^7\left(a\operatorname{Cos}[c+dx]+b\operatorname{Sin}[c+dx]\right)\left(-2940a^{10}b+294a^7b^3-14406a^8b^3-214284\,\mathrm{i}\,a^6b^4-\right.$$
$$156180432a^5b^5-24276a^6b^5+113833223438\,\mathrm{i}\,a^4b^6+82968158000042a^3b^7-13664a^4b^7-$$
$$60471934588030612\,\mathrm{i}\,a^2b^8-388894133623929672573646381388896840320\,a\,b^9+$$
$$9680a^2b^9+283448267107041312781534833978021668473234\,\mathrm{i}\,b^{10}-1242b^{11}+$$
$$2205a^{10}b\operatorname{Cos}[2(c+dx)]+147a^7b^3\operatorname{Cos}[2(c+dx)]+147a^8b^3\operatorname{Cos}[2(c+dx)]-$$
$$107142\,\mathrm{i}\,a^6b^4\operatorname{Cos}[2(c+dx)]-78090216a^5b^5\operatorname{Cos}[2(c+dx)]-18774a^6b^5\operatorname{Cos}[2(c+dx)]+$$
$$56916611719\,\mathrm{i}\,a^4b^6\operatorname{Cos}[2(c+dx)]+41484079000021a^3b^7\operatorname{Cos}[2(c+dx)]-$$
$$10654a^4b^7\operatorname{Cos}[2(c+dx)]-30235967294015306\,\mathrm{i}\,a^2b^8\operatorname{Cos}[2(c+dx)]-$$
$$194447066811964836286823190694448420160\,a\,b^9\operatorname{Cos}[2(c+dx)]+$$
$$7297a^2b^9\operatorname{Cos}[2(c+dx)]+141724133553520656390767416989010834236617$$
$$\mathrm{i}\,b^{10}\operatorname{Cos}[2(c+dx)]-621b^{11}\operatorname{Cos}[2(c+dx)]+8820a^{10}b\operatorname{Cos}[4(c+dx)]-$$
$$294a^7b^3\operatorname{Cos}[4(c+dx)]+26754a^8b^3\operatorname{Cos}[4(c+dx)]+214284\,\mathrm{i}\,a^6b^4\operatorname{Cos}[4(c+dx)]+$$
$$156180432a^5b^5\operatorname{Cos}[4(c+dx)]+17304a^6b^5\operatorname{Cos}[4(c+dx)]-$$
$$113833223438\,\mathrm{i}\,a^4b^6\operatorname{Cos}[4(c+dx)]-82968158000042a^3b^7\operatorname{Cos}[4(c+dx)]+$$
$$11732a^4b^7\operatorname{Cos}[4(c+dx)]+60471934588030612\,\mathrm{i}\,a^2b^8\operatorname{Cos}[4(c+dx)]+$$
$$388894133623929672573646381388896840320\,a\,b^9\operatorname{Cos}[4(c+dx)]-$$
$$8924a^2b^9\operatorname{Cos}[4(c+dx)]-283448267107041312781534833978021668473234$$
$$\mathrm{i}\,b^{10}\operatorname{Cos}[4(c+dx)]+1242b^{11}\operatorname{Cos}[4(c+dx)]+3675a^{10}b\operatorname{Cos}[6(c+dx)]-$$
$$147a^7b^3\operatorname{Cos}[6(c+dx)]+12201a^8b^3\operatorname{Cos}[6(c+dx)]+107142\,\mathrm{i}\,a^6b^4\operatorname{Cos}[6(c+dx)]+$$
$$78090216a^5b^5\operatorname{Cos}[6(c+dx)]+10626a^6b^5\operatorname{Cos}[6(c+dx)]-$$
$$56916611719\,\mathrm{i}\,a^4b^6\operatorname{Cos}[6(c+dx)]-41484079000021a^3b^7\operatorname{Cos}[6(c+dx)]+$$
$$6370a^4b^7\operatorname{Cos}[6(c+dx)]+30235967294015306\,\mathrm{i}\,a^2b^8\operatorname{Cos}[6(c+dx)]+$$
$$194447066811964836286823190694448420160\,a\,b^9\operatorname{Cos}[6(c+dx)]-$$
$$5029a^2b^9\operatorname{Cos}[6(c+dx)]-141724133553520656390767416989010834236617$$
$$\mathrm{i}\,b^{10}\operatorname{Cos}[6(c+dx)]+621b^{11}\operatorname{Cos}[6(c+dx)]-11025a^{11}\operatorname{Sin}[2(c+dx)]+$$
$$735a^8b^2\operatorname{Sin}[2(c+dx)]-38955a^9b^2\operatorname{Sin}[2(c+dx)]-535710\,\mathrm{i}\,a^7b^3\operatorname{Sin}[2(c+dx)]-$$
$$390451080a^6b^4\operatorname{Sin}[2(c+dx)]-49056a^7b^4\operatorname{Sin}[2(c+dx)]+$$
$$284583058595\,\mathrm{i}\,a^5b^5\operatorname{Sin}[2(c+dx)]+207420395000105a^4b^6\operatorname{Sin}[2(c+dx)]-$$
$$43652a^5b^6\operatorname{Sin}[2(c+dx)]-151179836470076530\,\mathrm{i}\,a^3b^7\operatorname{Sin}[2(c+dx)]-$$
$$972235334059824181434115953472242100800a^2b^8\operatorname{Sin}[2(c+dx)]+$$

$26657\,a^3\,b^8\,\mathrm{Sin}[2\,(c+d\,x)] + 708620667767603281953837084945054171183085\,i\,a\,b^9\,\mathrm{Sin}[2\,(c+d\,x)] - 3105\,a\,b^{10}\,\mathrm{Sin}[2\,(c+d\,x)] - 8820\,a^{11}\,\mathrm{Sin}[4\,(c+d\,x)] + 588\,a^8\,b^2\,\mathrm{Sin}[4\,(c+d\,x)] - 29400\,a^9\,b^2\,\mathrm{Sin}[4\,(c+d\,x)] - 428568\,i\,a^7\,b^3\,\mathrm{Sin}[4\,(c+d\,x)] - 312360864\,a^6\,b^4\,\mathrm{Sin}[4\,(c+d\,x)] - 33012\,a^7\,b^4\,\mathrm{Sin}[4\,(c+d\,x)] + 227666446876\,i\,a^5\,b^5\,\mathrm{Sin}[4\,(c+d\,x)] + 165936316000084\,a^4\,b^6\,\mathrm{Sin}[4\,(c+d\,x)] - 31780\,a^5\,b^6\,\mathrm{Sin}[4\,(c+d\,x)] - 120943869176061224\,i\,a^3\,b^7\,\mathrm{Sin}[4\,(c+d\,x)] - 777788267247859345147292762777793680640\,a^2\,b^8\,\mathrm{Sin}[4\,(c+d\,x)] + 17848\,a^3\,b^8\,\mathrm{Sin}[4\,(c+d\,x)] + 566896534214082625563069667956043336946468\,i\,a\,b^9\,\mathrm{Sin}[4\,(c+d\,x)] - 2484\,a\,b^{10}\,\mathrm{Sin}[4\,(c+d\,x)] - 2205\,a^{11}\,\mathrm{Sin}[6\,(c+d\,x)] + 147\,a^8\,b^2\,\mathrm{Sin}[6\,(c+d\,x)] - 6615\,a^9\,b^2\,\mathrm{Sin}[6\,(c+d\,x)] - 107142\,i\,a^7\,b^3\,\mathrm{Sin}[6\,(c+d\,x)] - 78090216\,a^6\,b^4\,\mathrm{Sin}[6\,(c+d\,x)] - 6048\,a^7\,b^4\,\mathrm{Sin}[6\,(c+d\,x)] + 56916611719\,i\,a^5\,b^5\,\mathrm{Sin}[6\,(c+d\,x)] + 41484079000021\,a^4\,b^6\,\mathrm{Sin}[6\,(c+d\,x)] - 7420\,a^5\,b^6\,\mathrm{Sin}[6\,(c+d\,x)] - 30235967294015306\,i\,a^3\,b^7\,\mathrm{Sin}[6\,(c+d\,x)] - 194447066811964836286823190694448420160\,a^2\,b^8\,\mathrm{Sin}[6\,(c+d\,x)] + 3517\,a^3\,b^8\,\mathrm{Sin}[6\,(c+d\,x)] + 141724133553520656390767416989010834236617\,i\,a\,b^9\,\mathrm{Sin}[6\,(c+d\,x)] - 621\,a\,b^{10}\,\mathrm{Sin}[6\,(c+d\,x)])$

Problem 569: Result more than twice size of optimal antiderivative.

$$\int \frac{\mathrm{Sec}[c+d\,x]^2}{(a+b\,\mathrm{Tan}[c+d\,x])^3}\,dx$$

Optimal (type 3, 22 leaves, 2 steps):

$$-\frac{1}{2\,b\,d\,(a+b\,\mathrm{Tan}[c+d\,x])^2}$$

Result (type 3, 58 leaves):

$$\frac{-b\,\mathrm{Sec}[c+d\,x]^2+2\,\mathrm{Tan}[c+d\,x]\,(a+b\,\mathrm{Tan}[c+d\,x])}{2\,(a^2+b^2)\,d\,(a+b\,\mathrm{Tan}[c+d\,x])^2}$$

Problem 570: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{\mathrm{Cos}[c+d\,x]^2}{(a+b\,\mathrm{Tan}[c+d\,x])^3}\,dx$$

Optimal (type 3, 202 leaves, 7 steps):

$$\frac{a\,(a^4+10\,a^2\,b^2-15\,b^4)\,x}{2\,(a^2+b^2)^4}+\frac{2\,b^3\,(5\,a^2-b^2)\,\mathrm{Log}[a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x]]}{(a^2+b^2)^4\,d}+\frac{b\,(a^2-2\,b^2)}{2\,(a^2+b^2)^2\,d\,(a+b\,\mathrm{Tan}[c+d\,x])^2}+\frac{\mathrm{Cos}[c+d\,x]^2\,(b+a\,\mathrm{Tan}[c+d\,x])}{2\,(a^2+b^2)\,d\,(a+b\,\mathrm{Tan}[c+d\,x])^2}+\frac{a\,b\,(a^2-11\,b^2)}{2\,(a^2+b^2)^3\,d\,(a+b\,\mathrm{Tan}[c+d\,x])}$$

Result (type 3, 713 leaves):

$$-\frac{b^5 \operatorname{Sec}[c+d x]^3 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])}{2 (a-\mathrm{i} b)^3 (a+\mathrm{i} b)^3 d (a+b \operatorname{Tan}[c+d x])^3}+$$
$$\left(a \left(a^4+10 a^2 b^2-15 b^4\right) (c+d x) \operatorname{Sec}[c+d x]^3 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^3\right) \Big/ \left(2 (a-\mathrm{i} b)^4 (a+\mathrm{i} b)^4 d (a+b \operatorname{Tan}[c+d x])^3\right)+$$
$$\left(2 \left(5 \mathrm{i} a^{11} b^3+5 a^{10} b^4+14 \mathrm{i} a^9 b^5+14 a^8 b^6+12 \mathrm{i} a^7 b^7+12 a^6 b^8+2 \mathrm{i} a^5 b^9+2 a^4 b^{10}-\mathrm{i} a^3 b^{11}-a^2 b^{12}\right) (c+d x) \operatorname{Sec}[c+d x]^3 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^3\right) \Big/ \left(a^2 (a-\mathrm{i} b)^8 (a+\mathrm{i} b)^7 d (a+b \operatorname{Tan}[c+d x])^3\right)-$$
$$\left(2 \mathrm{i} \left(5 a^2 b^3-b^5\right) \operatorname{ArcTan}[\operatorname{Tan}[c+d x]] \operatorname{Sec}[c+d x]^3 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^3\right) \Big/ \left(\left(a^2+b^2\right)^4 d (a+b \operatorname{Tan}[c+d x])^3\right)+$$
$$\left(b \left(3 a^2-b^2\right) \operatorname{Cos}[2 (c+d x)] \operatorname{Sec}[c+d x]^3 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^3\right) \Big/ \left(4 (a-\mathrm{i} b)^3 (a+\mathrm{i} b)^3 d (a+b \operatorname{Tan}[c+d x])^3\right)+$$
$$\left(\left(5 a^2 b^3-b^5\right) \operatorname{Log}\left[(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2\right] \operatorname{Sec}[c+d x]^3 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^3\right) \Big/ \left(\left(a^2+b^2\right)^4 d (a+b \operatorname{Tan}[c+d x])^3\right)+$$
$$\left(a \left(a^2-3 b^2\right) \operatorname{Sec}[c+d x]^3 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^3 \operatorname{Sin}[2 (c+d x)]\right) \Big/ \left(4 (a-\mathrm{i} b)^3 (a+\mathrm{i} b)^3 d (a+b \operatorname{Tan}[c+d x])^3\right)+$$
$$\frac{5 b^4 \operatorname{Sec}[c+d x]^2 (a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x])^2 \operatorname{Tan}[c+d x]}{(a-\mathrm{i} b)^3 (a+\mathrm{i} b)^3 d (a+b \operatorname{Tan}[c+d x])^3}$$

Problem 571: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{\operatorname{Cos}[c+d x]^4}{(a+b \operatorname{Tan}[c+d x])^3} \, dx$$

Optimal (type 3, 295 leaves, 8 steps):

$$\frac{3 a \left(a^6+7 a^4 b^2+35 a^2 b^4-35 b^6\right) x}{8 \left(a^2+b^2\right)^5}+\frac{3 b^5 \left(7 a^2-b^2\right) \operatorname{Log}[a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x]]}{\left(a^2+b^2\right)^5 d}+$$
$$\frac{3 b \left(a^4+5 a^2 b^2-4 b^4\right)}{8 \left(a^2+b^2\right)^3 d (a+b \operatorname{Tan}[c+d x])^2}+\frac{\operatorname{Cos}[c+d x]^4 (b+a \operatorname{Tan}[c+d x])}{4 \left(a^2+b^2\right) d (a+b \operatorname{Tan}[c+d x])^2}+$$
$$\frac{3 a b \left(a^4+6 a^2 b^2-27 b^4\right)}{8 \left(a^2+b^2\right)^4 d (a+b \operatorname{Tan}[c+d x])}-\frac{\operatorname{Cos}[c+d x]^2 \left(2 b \left(a^2-3 b^2\right)-a \left(3 a^2+11 b^2\right) \operatorname{Tan}[c+d x]\right)}{8 \left(a^2+b^2\right)^2 d (a+b \operatorname{Tan}[c+d x])^2}$$

Result (type 3, 924 leaves):

$$-\frac{b^7 \operatorname{Sec}[c+d x]^3 \left(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x]\right)}{2 (a-i b)^4 (a+i b)^4 d \left(a+b \operatorname{Tan}[c+d x]\right)^3}+$$
$$\left(3 a \left(a^6+7 a^4 b^2+35 a^2 b^4-35 b^6\right) (c+d x) \operatorname{Sec}[c+d x]^3 \left(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x]\right)^3\right) \Big/$$
$$\left(8 (a-i b)^5 (a+i b)^5 d \left(a+b \operatorname{Tan}[c+d x]\right)^3\right)+$$
$$\left(3 \left(7 i a^{13} b^5+7 a^{12} b^6+27 i a^{11} b^7+27 a^{10} b^8+38 i a^9 b^9+38 a^8 b^{10}+22 i a^7 b^{11}+22 a^6 b^{12}+3 i a^5 b^{13}+\right.\right.$$
$$\left.\left.3 a^4 b^{14}-i a^3 b^{15}-a^2 b^{16}\right) (c+d x) \operatorname{Sec}[c+d x]^3 \left(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x]\right)^3\right) \Big/$$
$$\left(a^2 (a-i b)^{10} (a+i b)^9 d \left(a+b \operatorname{Tan}[c+d x]\right)^3\right)-$$
$$\left(3 i \left(7 a^2 b^5-b^7\right) \operatorname{ArcTan}[\operatorname{Tan}[c+d x]] \operatorname{Sec}[c+d x]^3 \left(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x]\right)^3\right) \Big/$$
$$\left(\left(a^2+b^2\right)^5 d \left(a+b \operatorname{Tan}[c+d x]\right)^3\right)+$$
$$\left(b \left(3 a^4+22 a^2 b^2-5 b^4\right) \operatorname{Cos}[2 (c+d x)] \operatorname{Sec}[c+d x]^3 \left(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x]\right)^3\right) \Big/$$
$$\left(8 (a-i b)^4 (a+i b)^4 d \left(a+b \operatorname{Tan}[c+d x]\right)^3\right)+$$
$$\left(b \left(3 a^2-b^2\right) \operatorname{Cos}[4 (c+d x)] \operatorname{Sec}[c+d x]^3 \left(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x]\right)^3\right) \Big/$$
$$\left(32 (a-i b)^3 (a+i b)^3 d \left(a+b \operatorname{Tan}[c+d x]\right)^3\right)+$$
$$\left(3 \left(7 a^2 b^5-b^7\right) \operatorname{Log}\left[\left(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x]\right)^2\right] \operatorname{Sec}[c+d x]^3\right.$$
$$\left.\left(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x]\right)^3\right) \Big/ \left(2 \left(a^2+b^2\right)^5 d \left(a+b \operatorname{Tan}[c+d x]\right)^3\right)+$$
$$\left(a \left(a^4+4 a^2 b^2-9 b^4\right) \operatorname{Sec}[c+d x]^3 \left(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x]\right)^3 \operatorname{Sin}[2 (c+d x)]\right) \Big/$$
$$\left(4 (a-i b)^4 (a+i b)^4 d \left(a+b \operatorname{Tan}[c+d x]\right)^3\right)+$$
$$\left(a \left(a^2-3 b^2\right) \operatorname{Sec}[c+d x]^3 \left(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x]\right)^3 \operatorname{Sin}[4 (c+d x)]\right) \Big/$$
$$\left(32 (a-i b)^3 (a+i b)^3 d \left(a+b \operatorname{Tan}[c+d x]\right)^3\right)+$$
$$\frac{7 b^6 \operatorname{Sec}[c+d x]^2 \left(a \operatorname{Cos}[c+d x]+b \operatorname{Sin}[c+d x]\right)^2 \operatorname{Tan}[c+d x]}{(a-i b)^4 (a+i b)^4 d \left(a+b \operatorname{Tan}[c+d x]\right)^3}$$

Problem 572: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{\operatorname{Sec}[c+d x]^7}{\left(a+b \operatorname{Tan}[c+d x]\right)^3} \, dx$$

Optimal (type 3, 239 leaves, 8 steps):

$$-\frac{5 a \left(4 a^2+3 b^2\right) \operatorname{ArcSinh}[\operatorname{Tan}[c+d x]] \operatorname{Sec}[c+d x]}{2 b^6 d \sqrt{\operatorname{Sec}[c+d x]^2}}-$$
$$\frac{5 \sqrt{a^2+b^2} \left(4 a^2+b^2\right) \operatorname{ArcTanh}\left[\frac{b-a \operatorname{Tan}[c+d x]}{\sqrt{a^2+b^2} \sqrt{\operatorname{Sec}[c+d x]^2}}\right] \operatorname{Sec}[c+d x]}{2 b^6 d \sqrt{\operatorname{Sec}[c+d x]^2}}-\frac{\operatorname{Sec}[c+d x]^5}{2 b d \left(a+b \operatorname{Tan}[c+d x]\right)^2}+$$
$$\frac{5 \operatorname{Sec}[c+d x]^3 \left(4 a+b \operatorname{Tan}[c+d x]\right)}{6 b^3 d \left(a+b \operatorname{Tan}[c+d x]\right)}+\frac{5 \operatorname{Sec}[c+d x] \left(4 a^2+b^2-2 a b \operatorname{Tan}[c+d x]\right)}{2 b^5 d}$$

Result (type 3, 688 leaves):

$$\frac{1}{12\,b^6\,d\,(a+b\,\mathrm{Tan}[c+d\,x])^3}\,\mathrm{Sec}[c+d\,x]^3\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])$$
$$\Bigg(\frac{6\,b^2\,(a^2+b^2)^2\,\mathrm{Sin}[c+d\,x]}{a}+\frac{6\,(a-i\,b)\,(a+i\,b)\,b\,(8\,a^2-b^2)\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])}{a}+$$
$$2\,b\,(36\,a^2+13\,b^2)\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2+$$
$$60\,\sqrt{a^2+b^2}\,(4\,a^2+b^2)\,\mathrm{ArcTanh}\Big[\frac{-b+a\,\mathrm{Tan}[\frac{1}{2}\,(c+d\,x)]}{\sqrt{a^2+b^2}}\Big]\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2+$$
$$30\,a\,(4\,a^2+3\,b^2)\,\mathrm{Log}\Big[\mathrm{Cos}\Big[\frac{1}{2}\,(c+d\,x)\Big]-\mathrm{Sin}\Big[\frac{1}{2}\,(c+d\,x)\Big]\Big]\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2-$$
$$30\,a\,(4\,a^2+3\,b^2)\,\mathrm{Log}\Big[\mathrm{Cos}\Big[\frac{1}{2}\,(c+d\,x)\Big]+\mathrm{Sin}\Big[\frac{1}{2}\,(c+d\,x)\Big]\Big]\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2+$$
$$\frac{b^2\,(-9\,a+b)\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2}{\big(\mathrm{Cos}[\frac{1}{2}\,(c+d\,x)]-\mathrm{Sin}[\frac{1}{2}\,(c+d\,x)]\big)^2}+$$
$$\frac{2\,b^3\,\mathrm{Sin}[\frac{1}{2}\,(c+d\,x)]\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2}{\big(\mathrm{Cos}[\frac{1}{2}\,(c+d\,x)]-\mathrm{Sin}[\frac{1}{2}\,(c+d\,x)]\big)^3}+$$
$$\Big(2\,b\,(36\,a^2+13\,b^2)\,\mathrm{Sin}\Big[\frac{1}{2}\,(c+d\,x)\Big]\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2\Big)\Big/$$
$$\Big(\mathrm{Cos}\Big[\frac{1}{2}\,(c+d\,x)\Big]-\mathrm{Sin}\Big[\frac{1}{2}\,(c+d\,x)\Big]\Big)-$$
$$\frac{2\,b^3\,\mathrm{Sin}[\frac{1}{2}\,(c+d\,x)]\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2}{\big(\mathrm{Cos}[\frac{1}{2}\,(c+d\,x)]+\mathrm{Sin}[\frac{1}{2}\,(c+d\,x)]\big)^3}+$$
$$\frac{b^2\,(9\,a+b)\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2}{\big(\mathrm{Cos}[\frac{1}{2}\,(c+d\,x)]+\mathrm{Sin}[\frac{1}{2}\,(c+d\,x)]\big)^2}-$$
$$\Big(2\,b\,(36\,a^2+13\,b^2)\,\mathrm{Sin}\Big[\frac{1}{2}\,(c+d\,x)\Big]\,(a\,\mathrm{Cos}[c+d\,x]+b\,\mathrm{Sin}[c+d\,x])^2\Big)\Big/$$
$$\Big(\mathrm{Cos}\Big[\frac{1}{2}\,(c+d\,x)\Big]+\mathrm{Sin}\Big[\frac{1}{2}\,(c+d\,x)\Big]\Big)\Bigg)$$

Problem 573: Result more than twice size of optimal antiderivative.

$$\int\frac{\mathrm{Sec}[c+d\,x]^5}{(a+b\,\mathrm{Tan}[c+d\,x])^3}\,dx$$

Optimal (type 3, 148 leaves, 7 steps):

$$-\frac{3\,a\,\text{ArcTanh}[\text{Sin}[c+d\,x]]}{b^4\,d}-\frac{3\,\left(2\,a^2+b^2\right)\,\text{ArcTanh}\left[\frac{b\,\text{Cos}[c+d\,x]-a\,\text{Sin}[c+d\,x]}{\sqrt{a^2+b^2}}\right]}{2\,b^4\,\sqrt{a^2+b^2}\,d}-\frac{\text{Sec}[c+d\,x]^3}{2\,b\,d\,\left(a+b\,\text{Tan}[c+d\,x]\right)^2}+\frac{3\,\text{Sec}[c+d\,x]\,\left(2\,a+b\,\text{Tan}[c+d\,x]\right)}{2\,b^3\,d\,\left(a+b\,\text{Tan}[c+d\,x]\right)}$$

Result (type 3, 396 leaves):

$$\frac{1}{2\,b^4\,d\,\left(a+b\,\text{Tan}[c+d\,x]\right)^3}\text{Sec}[c+d\,x]^3\,\left(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x]\right)$$
$$\left(\frac{b^2\,\left(a^2+b^2\right)\,\text{Sin}[c+d\,x]}{a}+\frac{\left(2\,a-b\right)\,b\,\left(2\,a+b\right)\,\left(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x]\right)}{a}+\right.$$
$$2\,b\,\left(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x]\right)^2+\frac{1}{\sqrt{a^2+b^2}}$$
$$6\,\left(2\,a^2+b^2\right)\,\text{ArcTanh}\left[\frac{-b+a\,\text{Tan}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]}{\sqrt{a^2+b^2}}\right]\,\left(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x]\right)^2+$$
$$6\,a\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]-\text{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]\,\left(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x]\right)^2-$$
$$6\,a\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\right]\,\left(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x]\right)^2+$$
$$\frac{2\,b\,\text{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\,\left(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x]\right)^2}{\text{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]-\text{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]}-$$
$$\left.\frac{2\,b\,\text{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]\,\left(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x]\right)^2}{\text{Cos}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\,\left(c+d\,x\right)\right]}\right)$$

Problem 574: Result unnecessarily involves imaginary or complex numbers.

$$\int\frac{\text{Sec}[c+d\,x]^3}{\left(a+b\,\text{Tan}[c+d\,x]\right)^3}\,dx$$

Optimal (type 3, 95 leaves, 4 steps):

$$-\frac{\text{ArcTanh}\left[\frac{b\,\text{Cos}[c+d\,x]-a\,\text{Sin}[c+d\,x]}{\sqrt{a^2+b^2}}\right]}{2\,\left(a^2+b^2\right)^{3/2}\,d}-\frac{\text{Sec}[c+d\,x]\,\left(b-a\,\text{Tan}[c+d\,x]\right)}{2\,\left(a^2+b^2\right)\,d\,\left(a+b\,\text{Tan}[c+d\,x]\right)^2}$$

Result (type 3, 132 leaves):

$$\left(\left(a^2+b^2\right)\left(-b\,\text{Cos}[c+d\,x]+a\,\text{Sin}[c+d\,x]\right)+2\sqrt{a^2+b^2}\,\text{ArcTanh}\left[\frac{-b+a\,\text{Tan}\left[\frac{1}{2}(c+d\,x)\right]}{\sqrt{a^2+b^2}}\right]\left(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x]\right)^2\right)\Big/\left(2\,(a-\mathrm{i}\,b)^2\,(a+\mathrm{i}\,b)^2\,d\,\left(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x]\right)^2\right)$$

Problem 601: Result more than twice size of optimal antiderivative.

$$\int \frac{(a+b\,\text{Tan}[e+f\,x])^3}{(d\,\text{Sec}[e+f\,x])^{9/2}}\,dx$$

Optimal (type 4, 176 leaves, 4 steps):

$$\left(2\,a\left(7\,a^2+6\,b^2\right)\text{EllipticE}\left[\frac{1}{2}\text{ArcTan}[\text{Tan}[e+f\,x]],2\right]\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right)\Big/\left(15\,d^4\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\right)-\frac{2\,\text{Cos}[e+f\,x]^4\,(b-a\,\text{Tan}[e+f\,x])\,(a+b\,\text{Tan}[e+f\,x])^2}{9\,d^4\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}}-\frac{2\,\text{Cos}[e+f\,x]^2\left(2\,b\left(5\,a^2+2\,b^2\right)-a\left(7\,a^2+b^2\right)\text{Tan}[e+f\,x]\right)}{45\,d^4\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}}$$

Result (type 4, 372 leaves):

$$\left(\text{Sec}[e+f\,x]^{3/2}\left(\frac{2\left(56\,a^3+48\,a\,b^2\right)\text{EllipticE}\left[\frac{1}{2}(e+f\,x),2\right]}{\sqrt{\text{Cos}[e+f\,x]}\,\sqrt{\text{Sec}[e+f\,x]}}-\left(2\left(15\,a^2\,b+7\,b^3\right)\text{Sin}[e+f\,x]^2\right)\Big/\left(\sqrt{1-\text{Cos}[e+f\,x]^2}\,\sqrt{\text{Sec}[e+f\,x]}\,\sqrt{\text{Cos}[e+f\,x]^2\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)\right)(a+b\,\text{Tan}[e+f\,x])^3\right)\Big/\left(120\,f\,(d\,\text{Sec}[e+f\,x])^{9/2}\,(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x])^3\right)+\left(\text{Sec}[e+f\,x]^2\left(-\frac{1}{90}\,b\left(15\,a^2+4\,b^2\right)\text{Cos}[e+f\,x]-\frac{1}{360}\,b\left(75\,a^2+11\,b^2\right)\text{Cos}[3\,(e+f\,x)]-\frac{1}{72}\,b\left(3\,a^2-b^2\right)\text{Cos}[5\,(e+f\,x)]+\frac{1}{180}\,a\left(19\,a^2-3\,b^2\right)\text{Sin}[e+f\,x]+\frac{1}{360}\,a\left(43\,a^2-21\,b^2\right)\text{Sin}[3\,(e+f\,x)]+\frac{1}{72}\,a\left(a^2-3\,b^2\right)\text{Sin}[5\,(e+f\,x)]\right)(a+b\,\text{Tan}[e+f\,x])^3\right)\Big/\left(f\,(d\,\text{Sec}[e+f\,x])^{9/2}\,(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x])^3\right)$$

Problem 603: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{(d\,\text{Sec}[e+f\,x])^{7/2}}{a+b\,\text{Tan}[e+f\,x]}\,dx$$

Optimal (type 4, 456 leaves, 17 steps):

$$\frac{2 d^2 (d \operatorname{Sec}[e+f x])^{3/2}}{3 b f}+\frac{\left(a^2+b^2\right)^{3/4} d^2 \operatorname{ArcTan}\left[\frac{\sqrt{b} \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] (d \operatorname{Sec}[e+f x])^{3/2}}{b^{5/2} f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}}-$$

$$\frac{\left(a^2+b^2\right)^{3/4} d^2 \operatorname{ArcTanh}\left[\frac{\sqrt{b} \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] (d \operatorname{Sec}[e+f x])^{3/2}}{b^{5/2} f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}}+$$

$$\frac{2 a d^2 \operatorname{EllipticE}\left[\frac{1}{2} \operatorname{ArcTan}[\operatorname{Tan}[e+f x]],2\right] (d \operatorname{Sec}[e+f x])^{3/2}}{b^2 f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}}-$$

$$\frac{2 a d^2 \operatorname{Cos}[e+f x] (d \operatorname{Sec}[e+f x])^{3/2} \operatorname{Sin}[e+f x]}{b^2 f}-$$

$$\left(a \sqrt{a^2+b^2} d^2 \operatorname{Cot}[e+f x] \operatorname{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}}, \operatorname{ArcSin}\left[\left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right],-1\right] (d \operatorname{Sec}[e+f x])^{3/2} \sqrt{-\operatorname{Tan}[e+f x]^2}\right) \Big/ \left(b^3 f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}\right)+$$

$$\left(a \sqrt{a^2+b^2} d^2 \operatorname{Cot}[e+f x] \operatorname{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}}, \operatorname{ArcSin}\left[\left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right],-1\right] (d \operatorname{Sec}[e+f x])^{3/2} \sqrt{-\operatorname{Tan}[e+f x]^2}\right) \Big/ \left(b^3 f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}\right)$$

Result (type 4, 31 275 leaves): Display of huge result suppressed!

Problem 604: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{(d \operatorname{Sec}[e+f x])^{5/2}}{a+b \operatorname{Tan}[e+f x]} \, dx$$

Optimal (type 4, 396 leaves, 17 steps):

$$\frac{2 d^2 \sqrt{d \operatorname{Sec}[e+f x]}}{b f}-\frac{\left(a^2+b^2\right)^{1/4} d^2 \operatorname{ArcTan}\left[\frac{\sqrt{b} \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] \sqrt{d \operatorname{Sec}[e+f x]}}{b^{3/2} f \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}-$$

$$\frac{\left(a^2+b^2\right)^{1/4} d^2 \operatorname{ArcTanh}\left[\frac{\sqrt{b} \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] \sqrt{d \operatorname{Sec}[e+f x]}}{b^{3/2} f \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}-$$

$$\frac{2 a d^2 \operatorname{EllipticF}\left[\frac{1}{2} \operatorname{ArcTan}[\operatorname{Tan}[e+f x]], 2\right] \sqrt{d \operatorname{Sec}[e+f x]}}{b^2 f \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}+$$

$$\left(a d^2 \operatorname{Cot}[e+f x] \operatorname{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}}, \operatorname{ArcSin}\left[\left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right], -1\right] \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{-\operatorname{Tan}[e+f x]^2}\right) \Big/ \left(b^2 f \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right)+$$

$$\left(a d^2 \operatorname{Cot}[e+f x] \operatorname{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}}, \operatorname{ArcSin}\left[\left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right], -1\right] \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{-\operatorname{Tan}[e+f x]^2}\right) \Big/ \left(b^2 f \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right)$$

Result (type 4, 40 058 leaves) : Display of huge result suppressed!

Problem 605: Result unnecessarily involves higher level functions.

$$\int \frac{(d \operatorname{Sec}[e+f x])^{3/2}}{a+b \operatorname{Tan}[e+f x]} \, dx$$

Optimal (type 4, 334 leaves, 13 steps) :

$$\frac{\operatorname{ArcTan}\left[\frac{\sqrt{b} \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] (d \operatorname{Sec}[e+f x])^{3/2}}{\sqrt{b} \left(a^2+b^2\right)^{1/4} f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}}-\frac{\operatorname{ArcTanh}\left[\frac{\sqrt{b} \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] (d \operatorname{Sec}[e+f x])^{3/2}}{\sqrt{b} \left(a^2+b^2\right)^{1/4} f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}}-$$

$$\left(a \operatorname{Cot}[e+f x] \operatorname{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}}, \operatorname{ArcSin}\left[\left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right], -1\right] (d \operatorname{Sec}[e+f x])^{3/2} \sqrt{-\operatorname{Tan}[e+f x]^2}\right) \Big/ \left(b \sqrt{a^2+b^2} f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}\right)+$$

$$\left(a \operatorname{Cot}[e+f x] \operatorname{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}}, \operatorname{ArcSin}\left[\left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right], -1\right] (d \operatorname{Sec}[e+f x])^{3/2} \sqrt{-\operatorname{Tan}[e+f x]^2}\right) \Big/ \left(b \sqrt{a^2+b^2} f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}\right)$$

Result (type 6, 276 leaves) :

$$-\left(\left(12\, d^2\, \text{AppellF1}\left[\frac{1}{2},\frac{1}{4},\frac{1}{4},\frac{3}{2},\frac{a-i\, b}{a+b\, \text{Tan}[e+f\, x]},\frac{a+i\, b}{a+b\, \text{Tan}[e+f\, x]}\right]\,(a+b\, \text{Tan}[e+f\, x])\right)\Big/\left(b\, f\, \sqrt{d\, \text{Sec}[e+f\, x]}\,\left((a+i\, b)\, \text{AppellF1}\left[\frac{3}{2},\frac{1}{4},\frac{5}{4},\frac{5}{2},\frac{a-i\, b}{a+b\, \text{Tan}[e+f\, x]},\frac{a+i\, b}{a+b\, \text{Tan}[e+f\, x]}\right]+(a-i\, b)\, \text{AppellF1}\left[\frac{3}{2},\frac{5}{4},\frac{1}{4},\frac{5}{2},\frac{a-i\, b}{a+b\, \text{Tan}[e+f\, x]},\frac{a+i\, b}{a+b\, \text{Tan}[e+f\, x]}\right]+6\, \text{AppellF1}\left[\frac{1}{2},\frac{1}{4},\frac{1}{4},\frac{3}{2},\frac{a-i\, b}{a+b\, \text{Tan}[e+f\, x]},\frac{a+i\, b}{a+b\, \text{Tan}[e+f\, x]}\right]\,(a+b\, \text{Tan}[e+f\, x])\right)\right)\right)$$

Problem 606: Result unnecessarily involves higher level functions.

$$\int \frac{\sqrt{d\, \text{Sec}[e+f\, x]}}{a+b\, \text{Tan}[e+f\, x]}\, dx$$

Optimal (type 4, 324 leaves, 14 steps):

$$-\frac{\sqrt{b}\, \text{ArcTan}\left[\frac{\sqrt{b}\, \left(\text{Sec}[e+f\, x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\, \sqrt{d\, \text{Sec}[e+f\, x]}}{\left(a^2+b^2\right)^{3/4}\, f\, \left(\text{Sec}[e+f\, x]^2\right)^{1/4}}-\frac{\sqrt{b}\, \text{ArcTanh}\left[\frac{\sqrt{b}\, \left(\text{Sec}[e+f\, x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\, \sqrt{d\, \text{Sec}[e+f\, x]}}{\left(a^2+b^2\right)^{3/4}\, f\, \left(\text{Sec}[e+f\, x]^2\right)^{1/4}}+\left(a\, \text{Cot}[e+f\, x]\, \text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+f\, x]^2\right)^{1/4}\right],-1\right]\, \sqrt{d\, \text{Sec}[e+f\, x]}\, \sqrt{-\text{Tan}[e+f\, x]^2}\right)\Big/\left(\left(a^2+b^2\right)\, f\, \left(\text{Sec}[e+f\, x]^2\right)^{1/4}\right)+\left(a\, \text{Cot}[e+f\, x]\, \text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+f\, x]^2\right)^{1/4}\right],-1\right]\, \sqrt{d\, \text{Sec}[e+f\, x]}\, \sqrt{-\text{Tan}[e+f\, x]^2}\right)\Big/\left(\left(a^2+b^2\right)\, f\, \left(\text{Sec}[e+f\, x]^2\right)^{1/4}\right)$$

Result (type 6, 280 leaves):

$$-\left(\left(20\, d^2\, \text{AppellF1}\left[\frac{3}{2},\frac{3}{4},\frac{3}{4},\frac{5}{2},\frac{a-i\, b}{a+b\, \text{Tan}[e+f\, x]},\frac{a+i\, b}{a+b\, \text{Tan}[e+f\, x]}\right]\,(a+b\, \text{Tan}[e+f\, x])\right)\Big/\left(3\, b\, f\, (d\, \text{Sec}[e+f\, x])^{3/2}\,\left(3\,(a+i\, b)\, \text{AppellF1}\left[\frac{5}{2},\frac{3}{4},\frac{7}{4},\frac{7}{2},\frac{a-i\, b}{a+b\, \text{Tan}[e+f\, x]},\frac{a+i\, b}{a+b\, \text{Tan}[e+f\, x]}\right]+3\,(a-i\, b)\, \text{AppellF1}\left[\frac{5}{2},\frac{7}{4},\frac{3}{4},\frac{7}{2},\frac{a-i\, b}{a+b\, \text{Tan}[e+f\, x]},\frac{a+i\, b}{a+b\, \text{Tan}[e+f\, x]}\right]+10\, \text{AppellF1}\left[\frac{3}{2},\frac{3}{4},\frac{3}{4},\frac{5}{2},\frac{a-i\, b}{a+b\, \text{Tan}[e+f\, x]},\frac{a+i\, b}{a+b\, \text{Tan}[e+f\, x]}\right]\,(a+b\, \text{Tan}[e+f\, x])\right)\right)\right)$$

Problem 607: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{1}{\sqrt{d\, \text{Sec}[e+f\, x]}\,(a+b\, \text{Tan}[e+f\, x])}\, dx$$

Optimal (type 4, 451 leaves, 17 steps):

$$\frac{b^{3/2}\,\text{ArcTan}\left[\frac{\sqrt{b}\,(\text{Sec}[e+f x]^2)^{1/4}}{(a^2+b^2)^{1/4}}\right](\text{Sec}[e+f x]^2)^{1/4}}{(a^2+b^2)^{5/4}\,f\,\sqrt{d\,\text{Sec}[e+f x]}}-\frac{b^{3/2}\,\text{ArcTanh}\left[\frac{\sqrt{b}\,(\text{Sec}[e+f x]^2)^{1/4}}{(a^2+b^2)^{1/4}}\right](\text{Sec}[e+f x]^2)^{1/4}}{(a^2+b^2)^{5/4}\,f\,\sqrt{d\,\text{Sec}[e+f x]}}+$$

$$\frac{2\,a\,\text{EllipticE}\left[\frac{1}{2}\text{ArcTan}[\text{Tan}[e+f x]],2\right](\text{Sec}[e+f x]^2)^{1/4}}{(a^2+b^2)\,f\,\sqrt{d\,\text{Sec}[e+f x]}}-\frac{2\,a\,\text{Tan}[e+f x]}{(a^2+b^2)\,f\,\sqrt{d\,\text{Sec}[e+f x]}}-$$

$$\left(a\,b\,\text{Cot}[e+f x]\,\text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[(\text{Sec}[e+f x]^2)^{1/4}\right],-1\right]\right.$$
$$\left.(\text{Sec}[e+f x]^2)^{1/4}\sqrt{-\text{Tan}[e+f x]^2}\right)\Big/\left((a^2+b^2)^{3/2}\,f\,\sqrt{d\,\text{Sec}[e+f x]}\right)+$$

$$\left(a\,b\,\text{Cot}[e+f x]\,\text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[(\text{Sec}[e+f x]^2)^{1/4}\right],-1\right](\text{Sec}[e+f x]^2)^{1/4}\right.$$
$$\left.\sqrt{-\text{Tan}[e+f x]^2}\right)\Big/\left((a^2+b^2)^{3/2}\,f\,\sqrt{d\,\text{Sec}[e+f x]}\right)+\frac{2\,(b+a\,\text{Tan}[e+f x])}{(a^2+b^2)\,f\,\sqrt{d\,\text{Sec}[e+f x]}}$$

Result (type 4, 34 824 leaves) : Display of huge result suppressed!

Problem 608: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{1}{(d\,\text{Sec}[e+f x])^{3/2}\,(a+b\,\text{Tan}[e+f x])}\,dx$$

Optimal (type 4, 422 leaves, 17 steps) :

$$-\frac{b^{5/2}\,\text{ArcTan}\left[\frac{\sqrt{b}\,(\text{Sec}[e+f x]^2)^{1/4}}{(a^2+b^2)^{1/4}}\right](\text{Sec}[e+f x]^2)^{3/4}}{(a^2+b^2)^{7/4}\,f\,(d\,\text{Sec}[e+f x])^{3/2}}-$$

$$\frac{b^{5/2}\,\text{ArcTanh}\left[\frac{\sqrt{b}\,(\text{Sec}[e+f x]^2)^{1/4}}{(a^2+b^2)^{1/4}}\right](\text{Sec}[e+f x]^2)^{3/4}}{(a^2+b^2)^{7/4}\,f\,(d\,\text{Sec}[e+f x])^{3/2}}+$$

$$\frac{2\,a\,\text{EllipticF}\left[\frac{1}{2}\text{ArcTan}[\text{Tan}[e+f x]],2\right](\text{Sec}[e+f x]^2)^{3/4}}{3\,(a^2+b^2)\,f\,(d\,\text{Sec}[e+f x])^{3/2}}+$$

$$\left(a\,b^2\,\text{Cot}[e+f x]\,\text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[(\text{Sec}[e+f x]^2)^{1/4}\right],-1\right]\right.$$
$$\left.(\text{Sec}[e+f x]^2)^{3/4}\sqrt{-\text{Tan}[e+f x]^2}\right)\Big/\left((a^2+b^2)^2\,f\,(d\,\text{Sec}[e+f x])^{3/2}\right)+$$

$$\left(a\,b^2\,\text{Cot}[e+f x]\,\text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[(\text{Sec}[e+f x]^2)^{1/4}\right],-1\right](\text{Sec}[e+f x]^2)^{3/4}\right.$$
$$\left.\sqrt{-\text{Tan}[e+f x]^2}\right)\Big/\left((a^2+b^2)^2\,f\,(d\,\text{Sec}[e+f x])^{3/2}\right)+\frac{2\,(b+a\,\text{Tan}[e+f x])}{3\,(a^2+b^2)\,f\,(d\,\text{Sec}[e+f x])^{3/2}}$$

Result (type 4, 11 857 leaves) :

$$\left(\text{Sec}[e+f x]^3 (a \text{Cos}[e+f x]+b \text{Sin}[e+f x]) \left(\frac{b}{3 (a-i b) (a+i b)}+\frac{b \text{Cos}[2 (e+f x)]}{3 (a-i b) (a+i b)}+\frac{a \text{Sin}[2 (e+f x)]}{3 (a-i b) (a+i b)}\right)\right) \Big/$$

$$\left(f (d \text{Sec}[e+f x])^{3/2} (a+b \text{Tan}[e+f x])\right)+\Bigg(2 \text{Sec}[e+f x]^{5/2} (a \text{Cos}[e+f x]+b \text{Sin}[e+f x])$$

$$\left(a^2 \Big/ \left(3 (a-i b) (a+i b) \sqrt{\text{Sec}[e+f x]} (a \text{Cos}[e+f x]+b \text{Sin}[e+f x])\right)+\right.$$

$$b^2 \Big/ \left((a-i b) (a+i b) \sqrt{\text{Sec}[e+f x]} (a \text{Cos}[e+f x]+b \text{Sin}[e+f x])\right)+$$

$$\left.\frac{a b \sqrt{\text{Sec}[e+f x]} \text{Sin}[e+f x]}{3 (a-i b) (a+i b) (a \text{Cos}[e+f x]+b \text{Sin}[e+f x])}\right) \sqrt{\frac{1}{1-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2}}$$

$$\Bigg(a^3 \text{EllipticF}\left[\text{ArcSin}\left[\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right],-1\right] \sqrt{1-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2}+$$

$$3 a b^2 \text{EllipticF}\left[\text{ArcSin}\left[\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right],-1\right] \sqrt{1-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2}+$$

$$\Bigg(3 a b^3 \Bigg(\left(a+b-\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}}{\sqrt{2}}\right],2\right]-(1-i) a$$

$$\left.\text{EllipticPi}\left[\frac{(1+i) \left(a+i \left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}}{\sqrt{2}}\right],2\right]\right)$$

$$\left.\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)-$$

$$\left(3\,a\,b^4\left(\left(a+b-\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})\,a\right.\right.$$

$$\left.\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a+\mathrm{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]\right)$$

$$\left.\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)+$$

$$\left(3\,a\,b^4\left(\left(a+b+\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})\,a\right.\right.$$

$$\text{EllipticPi}\Big[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\ \text{ArcSin}\Big[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\Big],\ 2\Big]\Bigg)$$

$$\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\ \left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2 \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\Bigg)\Bigg/$$

$$\left(\sqrt{a^2+b^2}\ \left(i\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)+$$

$$\Bigg(3\,a\,b^3\,\Bigg(-i\left(a+b+\sqrt{a^2+b^2}\right)\ \text{EllipticF}\Big[\text{ArcSin}\Big[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\Big],\ 2\Big]+(1+i)$$

$$a\,\text{EllipticPi}\Big[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\ \text{ArcSin}\Big[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\Big],\ 2\Big]\Bigg)$$

$$\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\ \left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2 \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\Bigg)\Bigg/$$

$$\left(\left(a+b+\sqrt{a^2+b^2}\right)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)\Bigg)\Bigg)\Bigg/$$

$$\Bigg(3\,a^2\,(a-\mathrm{i}\,b)\,(a+\mathrm{i}\,b)\,f\,(d\,\mathrm{Sec}[e+f\,x])^{3/2}$$

$$\Bigg(\frac{1}{3\,a^2\,(a-\mathrm{i}\,b)\,(a+\mathrm{i}\,b)}\,\mathrm{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\,\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{3/2}$$

$$\Bigg(a^3\,\mathrm{EllipticF}\Big[\mathrm{ArcSin}\Big[\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big],\,-1\Big]\,\sqrt{1-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2}\;+$$

$$3\,a\,b^2\,\mathrm{EllipticF}\Big[\mathrm{ArcSin}\Big[\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big],\,-1\Big]\,\sqrt{1-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2}\;+$$

$$\Bigg(3\,a\,b^3\,\Bigg(\left(a+b-\sqrt{a^2+b^2}\right)\,\mathrm{EllipticF}\Bigg[\mathrm{ArcSin}\Bigg[\frac{\sqrt{\frac{(1+\mathrm{i})\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\Bigg],\,2\Bigg]-$$

$$(1-\mathrm{i})\,a\,\mathrm{EllipticPi}\Bigg[\frac{(1+\mathrm{i})\,\left(a+\mathrm{i}\,\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},$$

$$\mathrm{ArcSin}\Bigg[\frac{\sqrt{\frac{(1+\mathrm{i})\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\Bigg],\,2\Bigg]\Bigg)\,\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}$$

$$\left.\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2 \sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right) \Big/ \left(\left(-a-b+\sqrt{a^2+b^2}\right)\right.$$

$$\left.\left(-\mathrm{i}\, a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right) - \left(3\, a\, b^4\left(\left(a+b-\sqrt{a^2+b^2}\right)\right.\right.$$

$$\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})\, a\, \mathrm{EllipticPi}\Big[$$

$$\left.\frac{(1+\mathrm{i})\left(a+\mathrm{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}}, \mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\Big]\right)$$

$$\left.\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right) \Big/$$

$$\left(\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\, a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)+$$

$$\left(3\, a\, b^4\left(\left(a+b+\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})\right.\right.$$

$$a\,\text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.2\right]\Bigg)\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2$$

$$\left.\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right)\Bigg/\left(\sqrt{a^2+b^2}\left(i\,a+b+\sqrt{a^2+b^2}\right)\right.$$

$$\left.\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)+\left(3\,a\,b^3\left(-i\left(a+b+\sqrt{a^2+b^2}\right)\right.\right.$$

$$\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]+(1+i)\,a\,\text{EllipticPi}\Bigg[$$

$$\left.\left.\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]\right)$$

$$\left.\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right)\Bigg/$$

$$\left.\left(\left(a+b+\sqrt{a^2+b^2}\right)\left(a-\mathrm{i}\left(b+\sqrt{a^2+b^2}\right)\right)\sqrt{1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)\right)+$$

$$\frac{1}{3a^2(a-\mathrm{i}b)(a+\mathrm{i}b)}2\sqrt{\frac{1}{1-\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2}}$$

$$\left(-\left(\left(a^3\operatorname{EllipticF}\left[\operatorname{ArcSin}\left[\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right],-1\right]\operatorname{Sec}\left[\frac{1}{2}(e+fx)\right]^2\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\Big/\right.\right.$$

$$\left.\left(2\sqrt{1-\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)\right)-\left(3ab^2\operatorname{EllipticF}\left[\operatorname{ArcSin}\left[\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right],-1\right]\right.$$

$$\left.\operatorname{Sec}\left[\frac{1}{2}(e+fx)\right]^2\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\Big/\left(2\sqrt{1-\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)-$$

$$\left(3ab^3\left(\left(a+b-\sqrt{a^2+b^2}\right)\operatorname{EllipticF}\left[\operatorname{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$(1-\mathrm{i})\,a\operatorname{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a+\mathrm{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\operatorname{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}}}{\sqrt{2}}\right],2\right]\right)\operatorname{Sec}\left[\frac{1}{2}(e+fx)\right]^2\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]$$

$$\left.\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\,\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(2\,\left(-a-b+\sqrt{a^2+b^2}\right)\,\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{3/2}\right)+$$

$$\left(3\,a\,b^4\,\left(\left(a+b-\sqrt{a^2+b^2}\right)\,\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],\,2\right]-\right.\right.$$

$$(1-\mathrm{i})\,a\,\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\,\left(a+\mathrm{i}\,\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],\,2\right]\right)\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]$$

$$\left.\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\,\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(2\,\sqrt{a^2+b^2}\,\left(-a-b+\sqrt{a^2+b^2}\right)\,\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{3/2}\right)-$$

$$\left(3\,a\,b^4\,\left(\left(a+b+\sqrt{a^2+b^2}\right)\,\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],\,2\right]-\right.\right.$$

$$(1-\mathrm{i})\,a\,\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\,\left(a-\mathrm{i}\,\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\right.$$

$$\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]$$

$$\left.\sqrt{-\frac{2+2 i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right)\Bigg/$$

$$\left(2\sqrt{a^2+b^2}\left(i a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{3/2}\right)-$$

$$\left(3 a b^3\left(-i\left(a+b+\sqrt{a^2+b^2}\right)\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]+\right.\right.$$

$$(1+i)\,a\,\text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]$$

$$\left.\sqrt{-\frac{2+2 i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right)\Bigg/$$

$$\left(2\left(a+b+\sqrt{a^2+b^2}\right)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{3/2}\right)+$$

$$\frac{a^3\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}}+\frac{3 a b^2\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}}+$$

$$\left(3\,a\,b^3\left(\left(a+b-\sqrt{a^2+b^2}\right)\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathbb{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$(1-\mathbb{i})\,a\,\text{EllipticPi}\left[\frac{(1+\mathbb{i})\left(a+\mathbb{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathbb{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]\right)\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2$$

$$\left.\sqrt{-\frac{2+2\,\mathbb{i}\,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}{\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2}}\right)\Bigg/$$

$$\left(\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathbb{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}\right)-$$

$$\left(3\,a\,b^4\left(\left(a+b-\sqrt{a^2+b^2}\right)\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathbb{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$(1-\mathbb{i})\,a\,\text{EllipticPi}\left[\frac{(1+\mathbb{i})\left(a+\mathbb{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathbb{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]\right)\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2$$

$$\left.\sqrt{-\frac{2+2\,\text{i}\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\text{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(\text{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\text{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(\sqrt{a^2+b^2}\,\left(-a-b+\sqrt{a^2+b^2}\right)\,\left(-\text{i}\,a-b+\sqrt{a^2+b^2}\right)\,\sqrt{1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)+$$

$$\left(3\,a\,b^4\left(\left(a+b+\sqrt{a^2+b^2}\right)\,\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+\text{i})\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\text{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$(1-\text{i})\,a\,\text{EllipticPi}\left[\frac{(1+\text{i})\,\left(a-\text{i}\,\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+\text{i})\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\text{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]\right)\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2$$

$$\left.\sqrt{-\frac{2+2\,\text{i}\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\text{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(\text{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\text{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(\sqrt{a^2+b^2}\,\left(\text{i}\,a+b+\sqrt{a^2+b^2}\right)\,\left(a+b+\sqrt{a^2+b^2}\right)\,\sqrt{1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)+$$

$$\left(3\,a\,b^3\left(-\text{i}\,\left(a+b+\sqrt{a^2+b^2}\right)\,\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+\text{i})\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\text{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]+\right.\right.$$

$$\left(1+i\right) a\,\text{EllipticPi}\Big[\frac{\left(1+i\right)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},$$

$$\left.\text{ArcSin}\Big[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\Big],2\Big]\right)\text{Sec}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2$$

$$\left.\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}{i+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}}\left(i+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right)\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^2}}\right)\Big/$$

$$\left(\left(a+b+\sqrt{a^2+b^2}\right)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)\sqrt{1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2}\right)+$$

$$\left(3\,a\,b^3\left(\left(a+b-\sqrt{a^2+b^2}\right)\text{EllipticF}\Big[\text{ArcSin}\Big[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\Big],2\Big]-\left(1-i\right)\right.\right.$$

$$a\,\text{EllipticPi}\Big[\frac{\left(1+i\right)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\text{ArcSin}\Big[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\Big],$$

$$\left.2\Big]\right)\left(i+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^2}}$$

$$\left.\left(\frac{\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\left(2+2\,i\,\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)}{2\left(i+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^2}-\frac{i\,\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2}{i+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}\right)\right)\Big/$$

$$\left(2\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}}\right.$$

$$\left.\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)-$$

$$\left(3\,a\,b^4\left(\left(a+b-\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})\right.\right.$$

$$a\,\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a+\mathrm{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.\left.2\right]\right)\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2}}$$

$$\left.\left(\frac{\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\left(2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)}{2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2}-\frac{\mathrm{i}\,\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}\right)\right)\Big/$$

$$\left(2\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\right.$$

$$\left.\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}}\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)+$$

$$\left(3\,a\,b^4\left(\left(a+b+\sqrt{a^2+b^2}\right)\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-i)\right.\right.$$

$$a\,\text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.\left.2\right]\right)\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2}}$$

$$\left.\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2\left(2+2\,i\,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{2\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2}-\frac{i\,\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}\right)\right)\Big/$$

$$\left(2\sqrt{a^2+b^2}\left(i\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\right.$$

$$\left.\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}\right)+$$

$$\left(3\,a\,b^3\left(-i\left(a+b+\sqrt{a^2+b^2}\right)\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]+(1+i)\right.\right.$$

$$a\,\text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],\right.$$

$$2\Big]\Bigg)\left(\mathrm{i}+\mathrm{Tan}\Big[\frac{1}{2}(e+f x)\Big]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\big[\frac{1}{2}(e+f x)\big]^2}{\left(\mathrm{i}+\mathrm{Tan}\big[\frac{1}{2}(e+f x)\big]\right)^2}}$$

$$\left(\frac{\mathrm{Sec}\big[\frac{1}{2}(e+f x)\big]^2\left(2+2\,\mathrm{i}\,\mathrm{Tan}\big[\frac{1}{2}(e+f x)\big]\right)}{2\left(\mathrm{i}+\mathrm{Tan}\big[\frac{1}{2}(e+f x)\big]\right)^2}-\frac{\mathrm{i}\,\mathrm{Sec}\big[\frac{1}{2}(e+f x)\big]^2}{\mathrm{i}+\mathrm{Tan}\big[\frac{1}{2}(e+f x)\big]}\right)\Bigg)\Big/$$

$$\Bigg(2\left(a+b+\sqrt{a^2+b^2}\right)\left(a-\mathrm{i}\left(b+\sqrt{a^2+b^2}\right)\right)\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\big[\frac{1}{2}(e+f x)\big]}{\mathrm{i}+\mathrm{Tan}\big[\frac{1}{2}(e+f x)\big]}}$$

$$\sqrt{1+\mathrm{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2}\Bigg)+$$

$$\Bigg(3\,a\,b^3\Bigg(\left(a+b-\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\Big[\mathrm{ArcSin}\Big[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\Big],2\Big]-(1-\mathrm{i})$$

$$a\,\mathrm{EllipticPi}\Big[\frac{(1+\mathrm{i})\left(a+\mathrm{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\mathrm{ArcSin}\Big[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\Big],$$

$$2\Big]\Bigg)\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\big[\frac{1}{2}(e+f x)\big]}{\mathrm{i}+\mathrm{Tan}\big[\frac{1}{2}(e+f x)\big]}}\left(\mathrm{i}+\mathrm{Tan}\Big[\frac{1}{2}(e+f x)\Big]\right)^2$$

$$\left(\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3}\right)\right) \Big/$$

$$\left(2\left(-a-b+\sqrt{a^2+b^2}\right)\left(-i a-b+\sqrt{a^2+b^2}\right)\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right.$$

$$\left.\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right) -$$

$$\left(3 a b^4\left(\left(a+b-\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right]-(1-i)\right.\right.$$

$$a \text{EllipticPi}\left[\frac{(1+i)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}}, \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.\left.2\right]\right)\sqrt{-\frac{2+2 i \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2$$

$$\left(\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3}\right)\right) \Big/$$

$$\left(2\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-i a-b+\sqrt{a^2+b^2}\right)\right.$$

$$\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\ \sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\ \Bigg) +$$

$$\Bigg(3 a b^4 \Bigg(\left(a+b+\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right] - (1-i)$$

$$a\,\text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}}, \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.2\right]\Bigg) \sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\ \left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2} - \frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3}\right)\Bigg) \Bigg/$$

$$\Bigg(2\sqrt{a^2+b^2}\left(i\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)$$

$$\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\ \sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\ \Bigg) +$$

$$\Bigg(3 a b^3 \Bigg(-i\left(a+b+\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right] + (1+i)$$

$$a\,\text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\ \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.2\right]\Bigg)\sqrt{-\frac{2+2 i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2$$

$$\left(\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3}\right)\right)\Bigg/$$

$$\left(2\left(a+b+\sqrt{a^2+b^2}\right)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right.$$

$$\left.\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)+$$

$$\left(3 a b^3\sqrt{-\frac{2+2 i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right.$$

$$\left(\left(\left(a+b-\sqrt{a^2+b^2}\right)\left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)\right)\Big/$$

$$\left(2\sqrt{2}\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\sqrt{1-\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right.$$

$$\left.\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right)-$$

$$\left(\left(\frac{1}{2}-\frac{i}{2}\right) a \left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right) \text{Sec}\left[\frac{1}{2} (e+f x)\right]^2}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right) \text{Sec}\left[\frac{1}{2} (e+f x)\right]^2\right.\right.\right.$$

$$\left.\left.\left.\left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)\right) \Big/ \left(i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)^2\right)\right) \Big/$$

$$\left(\sqrt{2} \sqrt{\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}} \sqrt{1-\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}\right.$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}} \left(1-\left(i \left(a+i \left(-b+\sqrt{a^2+b^2}\right)\right) \left(1+\text{Tan}\left[\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left.\left.\frac{1}{2} (e+f x)\right]\right)\right) \Big/ \left(\left(a+b-\sqrt{a^2+b^2}\right) \left(i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)\right)\right)\right)\right)\right) \Big/$$

$$\left(\left(-a-b+\sqrt{a^2+b^2}\right) \left(-i a-b+\sqrt{a^2+b^2}\right) \sqrt{1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2}\right)-$$

$$\left(3 a b^4 \sqrt{-\frac{2+2 i \text{Tan}\left[\frac{1}{2} (e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}} \left(i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)^2 \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)^2}}\right.$$

$$\left(\left(\left(a+b-\sqrt{a^2+b^2}\right) \left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right) \text{Sec}\left[\frac{1}{2} (e+f x)\right]^2}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right) \text{Sec}\left[\frac{1}{2} (e+f x)\right]^2\right.\right.\right.\right.$$

$$\left.\left.\left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)\right) \Big/ \left(i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)^2\right)\right) \Big/$$

$$\left(2 \sqrt{2} \sqrt{\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}} \sqrt{1-\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}\right.$$

$$\left.\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}\right)-$$

$$\left(\left(\frac{1}{2}-\frac{i}{2}\right) a \left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right) \text{Sec}\left[\frac{1}{2} (e+f x)\right]^2}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right) \text{Sec}\left[\frac{1}{2} (e+f x)\right]^2\right.\right.\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big)\Big/\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\Bigg)\Bigg)\Bigg/$$

$$\left(\sqrt{2}\,\sqrt{\frac{(1+\mathbb{i})\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\sqrt{1-\frac{(1+\mathbb{i})\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\right.$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(1-\left(\mathbb{i}\,\left(a+\mathbb{i}\,\left(-b+\sqrt{a^2+b^2}\right)\right)\,\left(1+\text{Tan}\left[\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left.\frac{1}{2}\,(e+f\,x)\right]\right)\right)\Big/\left(\left(a+b-\sqrt{a^2+b^2}\right)\,\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\right)\right)\right)\Bigg/$$

$$\left(\sqrt{a^2+b^2}\,\left(-a-b+\sqrt{a^2+b^2}\right)\,\left(-\mathbb{i}\,a-b+\sqrt{a^2+b^2}\right)\,\sqrt{1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)+$$

$$\left(3\,a\,b^4\,\sqrt{-\frac{2+2\,\mathbb{i}\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\,\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right.$$

$$\left(\left(\left(a+b+\sqrt{a^2+b^2}\right)\,\left(\frac{\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}-\left(\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right.\right.\right.\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big)\Big/\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\Bigg)\Bigg)\Bigg/$$

$$\left(2\,\sqrt{2}\,\sqrt{\frac{(1+\mathbb{i})\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\sqrt{1-\frac{(1+\mathbb{i})\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\right.$$

$$\left.\sqrt{1-\frac{\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\right)-$$

$$\left(\left(\frac{1}{2}-\frac{\mathbb{i}}{2}\right)\,a\,\left(\frac{\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}-\left(\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right.\right.\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big)\Big/\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\Bigg)\Bigg)\Bigg/$$

$$\left(\sqrt{2}\sqrt{\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}\sqrt{1-\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right.$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(1-\left(i\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)\left(1+\mathrm{Tan}\left[\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left.\left.\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(\left(a+b+\sqrt{a^2+b^2}\right)\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\right)\Big/$$

$$\left(\sqrt{a^2+b^2}\left(i a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)+$$

$$\left(3 a b^3\sqrt{-\frac{2+2 i\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right.$$

$$\left(-\left(\left(i\left(a+b+\sqrt{a^2+b^2}\right)\left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right.\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)\right)\Big/$$

$$\left(2\sqrt{2}\sqrt{\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}\sqrt{1-\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right.$$

$$\left.\left.\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right)\right)+$$

$$\left(\left(\frac{1}{2}+\frac{i}{2}\right)a\left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right.\right.\right.$$

$$\left.\left.\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)\right)\Big/$$

$$\left(\sqrt{2}\sqrt{\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}\sqrt{1-\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right.$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}$$

$$\left(1-\left(i\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/\right.$$

$$\left.\left(\left(a+b+\sqrt{a^2+b^2}\right)\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\Bigg)\Bigg)\Bigg)\Bigg/\Bigg(\left(a+b+\sqrt{a^2+b^2}\right)$$

$$\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\Bigg)\Bigg)\left(a+b\,\text{Tan}[e+f x]\right)\Bigg)$$

Problem 609: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\frac{1}{(d\,\text{Sec}[e+f x])^{5/2}\,(a+b\,\text{Tan}[e+f x])}\,dx$$

Optimal (type 4, 568 leaves, 18 steps):

$$\frac{b^{7/2}\,\text{ArcTan}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\left(\text{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{9/4}d^2 f\sqrt{d\,\text{Sec}[e+f x]}}-\frac{b^{7/2}\,\text{ArcTanh}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\left(\text{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{9/4}d^2 f\sqrt{d\,\text{Sec}[e+f x]}}+$$

$$\left(2a\left(3a^2+8b^2\right)\text{EllipticE}\left[\frac{1}{2}\text{ArcTan}[\text{Tan}[e+f x]],2\right]\left(\text{Sec}[e+f x]^2\right)^{1/4}\right)\Big/$$

$$\left(5\left(a^2+b^2\right)^2 d^2 f\sqrt{d\,\text{Sec}[e+f x]}\right)-\frac{2a\left(3a^2+8b^2\right)\text{Tan}[e+f x]}{5\left(a^2+b^2\right)^2 d^2 f\sqrt{d\,\text{Sec}[e+f x]}}-$$

$$\left(a\,b^3\,\text{Cot}[e+f x]\,\text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+f x]^2\right)^{1/4}\right],-1\right]\right.$$

$$\left.\left(\text{Sec}[e+f x]^2\right)^{1/4}\sqrt{-\text{Tan}[e+f x]^2}\right)\Big/\left(\left(a^2+b^2\right)^{5/2}d^2 f\sqrt{d\,\text{Sec}[e+f x]}\right)+$$

$$\left(a\,b^3\,\text{Cot}[e+f x]\,\text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+f x]^2\right)^{1/4}\right],-1\right]\right.$$

$$\left.\left(\text{Sec}[e+f x]^2\right)^{1/4}\sqrt{-\text{Tan}[e+f x]^2}\right)\Big/\left(\left(a^2+b^2\right)^{5/2}d^2 f\sqrt{d\,\text{Sec}[e+f x]}\right)+$$

$$\frac{2\,\text{Cos}[e+f x]^2\left(b+a\,\text{Tan}[e+f x]\right)}{5\left(a^2+b^2\right)d^2 f\sqrt{d\,\text{Sec}[e+f x]}}+\frac{2\left(5b^3+a\left(3a^2+8b^2\right)\text{Tan}[e+f x]\right)}{5\left(a^2+b^2\right)^2 d^2 f\sqrt{d\,\text{Sec}[e+f x]}}$$

Result (type 4, 33 345 leaves): Display of huge result suppressed!

Problem 610: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{(d \operatorname{Sec}[e+f x])^{7/2}}{(a+b \operatorname{Tan}[e+f x])^2} \, dx$$

Optimal (type 4, 480 leaves, 17 steps):

$$-\frac{3 a d^2 \operatorname{ArcTan}\left[\frac{\sqrt{b} \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] (d \operatorname{Sec}[e+f x])^{3/2}}{2 b^{5/2} \left(a^2+b^2\right)^{1/4} f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}}+\frac{3 a d^2 \operatorname{ArcTanh}\left[\frac{\sqrt{b} \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] (d \operatorname{Sec}[e+f x])^{3/2}}{2 b^{5/2} \left(a^2+b^2\right)^{1/4} f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}}-\frac{3 d^2 \operatorname{EllipticE}\left[\frac{1}{2} \operatorname{ArcTan}[\operatorname{Tan}[e+f x]], 2\right] (d \operatorname{Sec}[e+f x])^{3/2}}{b^2 f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}}+\frac{3 d^2 \operatorname{Cos}[e+f x] (d \operatorname{Sec}[e+f x])^{3/2} \operatorname{Sin}[e+f x]}{b^2 f}+\left(3 a^2 d^2 \operatorname{Cot}[e+f x] \operatorname{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}}, \operatorname{ArcSin}\left[\left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right], -1\right] (d \operatorname{Sec}[e+f x])^{3/2} \sqrt{-\operatorname{Tan}[e+f x]^2}\right) \Big/ \left(2 b^3 \sqrt{a^2+b^2} f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}\right)-\left(3 a^2 d^2 \operatorname{Cot}[e+f x] \operatorname{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}}, \operatorname{ArcSin}\left[\left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right], -1\right] (d \operatorname{Sec}[e+f x])^{3/2} \sqrt{-\operatorname{Tan}[e+f x]^2}\right) \Big/ \left(2 b^3 \sqrt{a^2+b^2} f \left(\operatorname{Sec}[e+f x]^2\right)^{3/4}\right)-\frac{d^2 (d \operatorname{Sec}[e+f x])^{3/2}}{b f (a+b \operatorname{Tan}[e+f x])}$$

Result (type 4, 31 777 leaves): Display of huge result suppressed!

Problem 611: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{(d \operatorname{Sec}[e+f x])^{5/2}}{(a+b \operatorname{Tan}[e+f x])^2} \, dx$$

Optimal (type 4, 440 leaves, 17 steps):

$$\frac{a\,d^2\,\text{ArcTan}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\sqrt{d\,\text{Sec}[e+f\,x]}}{2\,b^{3/2}\left(a^2+b^2\right)^{3/4}f\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}+\frac{a\,d^2\,\text{ArcTanh}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\sqrt{d\,\text{Sec}[e+f\,x]}}{2\,b^{3/2}\left(a^2+b^2\right)^{3/4}f\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}+$$

$$\frac{d^2\,\text{EllipticF}\left[\frac{1}{2}\text{ArcTan}[\text{Tan}[e+f\,x]],2\right]\sqrt{d\,\text{Sec}[e+f\,x]}}{b^2\,f\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}-$$

$$\left(a^2\,d^2\,\text{Cot}[e+f\,x]\,\text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right],-1\right]\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{-\text{Tan}[e+f\,x]^2}\right)\Big/\left(2\,b^2\left(a^2+b^2\right)f\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right)-$$

$$\left(a^2\,d^2\,\text{Cot}[e+f\,x]\,\text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right],-1\right]\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{-\text{Tan}[e+f\,x]^2}\right)\Big/\left(2\,b^2\left(a^2+b^2\right)f\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right)-\frac{d^2\sqrt{d\,\text{Sec}[e+f\,x]}}{b\,f\left(a+b\,\text{Tan}[e+f\,x]\right)}$$

Result (type 4, 3091 leaves):

$$\left(\left(d\,\text{Sec}[e+f\,x]\right)^{5/2}\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)^2\left(-\frac{1}{a\,b}+\frac{\text{Sin}[e+f\,x]}{a\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)}\right)\right)\Big/\left(f\left(a+b\,\text{Tan}[e+f\,x]\right)^2\right)-$$

$$\left(\left(\left(-2\,i\,b\sqrt{a^2+b^2}\,\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{1-i\,\text{Cos}[e+f\,x]+\text{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]+\right.\right.\right.$$

$$a\left(a-i\,b+\sqrt{a^2+b^2}\right)\text{EllipticPi}\left[\frac{(1+i)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\text{ArcSin}\left[\frac{\sqrt{1-i\,\text{Cos}[e+f\,x]+\text{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]+a\left(-a+i\,b+\sqrt{a^2+b^2}\right)\text{EllipticPi}\left[\right.$$

$$\left.\left.\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{1-i\,\text{Cos}[e+f\,x]+\text{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]\right)$$

$$\left(d\,\text{Sec}[e+f\,x]\right)^{5/2}\sqrt{\text{Cos}\left[\frac{1}{2}(e+f\,x)\right]^2\text{Sec}[e+f\,x]}\,\sqrt{i\,\text{Cos}[e+f\,x]-\text{Sin}[e+f\,x]}$$

$$\sqrt{\text{Cos}[e+f\,x]\left(\text{Cos}[e+f\,x]+i\,\text{Sin}[e+f\,x]\right)}\,\text{Sin}[e+f\,x]$$

$$\left.\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2\right)\Big/$$

$$\left(4\left(a-i\,b\right)b^3\sqrt{a^2+b^2}\,f\sqrt{\frac{1}{1+\text{Cos}[e+f\,x]}}\left(a+b\,\text{Tan}[e+f\,x]\right)^2\right.$$

$$\left(-\frac{1}{2\left(a-\mathrm{i}\,b\right)b^2\sqrt{a^2+b^2}\sqrt{\frac{1}{1+\mathrm{Cos}[e+f\,x]}}}\right.$$

$$\left(-2\,\mathrm{i}\,b\sqrt{a^2+b^2}\ \mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{1-\mathrm{i}\,\mathrm{Cos}[e+f\,x]+\mathrm{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]+\right.$$

$$a\left(a-\mathrm{i}\,b+\sqrt{a^2+b^2}\right)\mathrm{EllipticPi}\left[\frac{\left(1+\mathrm{i}\right)\left(a+\mathrm{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\mathrm{ArcSin}\left[\frac{\sqrt{1-\mathrm{i}\,\mathrm{Cos}[e+f\,x]+\mathrm{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]+a\left(-a+\mathrm{i}\,b+\sqrt{a^2+b^2}\right)\mathrm{EllipticPi}\Bigg[$$

$$\left.\frac{\left(1+\mathrm{i}\right)\left(a-\mathrm{i}\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{1-\mathrm{i}\,\mathrm{Cos}[e+f\,x]+\mathrm{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\Bigg]\right)$$

$$\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\sqrt{\mathrm{Cos}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\mathrm{Sec}[e+f\,x]\ \sqrt{\mathrm{i}\,\mathrm{Cos}[e+f\,x]-\mathrm{Sin}[e+f\,x]}}$$

$$\sqrt{\mathrm{Cos}[e+f\,x]\left(\mathrm{Cos}[e+f\,x]+\mathrm{i}\,\mathrm{Sin}[e+f\,x]\right)}\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)-$$

$$\left(1\Big/\left(4\left(a-\mathrm{i}\,b\right)b^2\sqrt{a^2+b^2}\sqrt{\frac{1}{1+\mathrm{Cos}[e+f\,x]}}\ \sqrt{\mathrm{i}\,\mathrm{Cos}[e+f\,x]-\mathrm{Sin}[e+f\,x]}\right)\right)$$

$$\left(-2\,\mathrm{i}\,b\sqrt{a^2+b^2}\ \mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{1-\mathrm{i}\,\mathrm{Cos}[e+f\,x]+\mathrm{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]+\right.$$

$$a\left(a-\mathrm{i}\,b+\sqrt{a^2+b^2}\right)\mathrm{EllipticPi}\left[\frac{\left(1+\mathrm{i}\right)\left(a+\mathrm{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\mathrm{ArcSin}\left[\frac{\sqrt{1-\mathrm{i}\,\mathrm{Cos}[e+f\,x]+\mathrm{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]+a\left(-a+\mathrm{i}\,b+\sqrt{a^2+b^2}\right)\mathrm{EllipticPi}\Bigg[$$

$$\left.\frac{\left(1+\mathrm{i}\right)\left(a-\mathrm{i}\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{1-\mathrm{i}\,\mathrm{Cos}[e+f\,x]+\mathrm{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\Bigg]\right)$$

$$\sqrt{\mathrm{Cos}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\mathrm{Sec}[e+f\,x]}\ \left(-\mathrm{Cos}[e+f\,x]-\mathrm{i}\,\mathrm{Sin}[e+f\,x]\right)$$

$$\sqrt{\mathrm{Cos}[e+f\,x]\left(\mathrm{Cos}[e+f\,x]+\mathrm{i}\,\mathrm{Sin}[e+f\,x]\right)}\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2+$$

$$\frac{1}{4\left(a-\mathrm{i}\,b\right)b^2\sqrt{a^2+b^2}}\sqrt{\frac{1}{1+\mathrm{Cos}[e+f\,x]}}$$

$$\left(-2\,i\,b\,\sqrt{a^2+b^2}\,\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{1-i\,\text{Cos}[e+f\,x]+\text{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]+\right.$$
$$a\left(a-i\,b+\sqrt{a^2+b^2}\right)\text{EllipticPi}\left[\frac{(1+i)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$
$$\left.\text{ArcSin}\left[\frac{\sqrt{1-i\,\text{Cos}[e+f\,x]+\text{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]+a\left(-a+i\,b+\sqrt{a^2+b^2}\right)\text{EllipticPi}\left[\right.$$
$$\left.\left.\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{1-i\,\text{Cos}[e+f\,x]+\text{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]\right)$$
$$\sqrt{\text{Cos}\left[\frac{1}{2}(e+f\,x)\right]^2\text{Sec}[e+f\,x]}\;\sqrt{i\,\text{Cos}[e+f\,x]-\text{Sin}[e+f\,x]}$$
$$\sqrt{\text{Cos}[e+f\,x]\,(\text{Cos}[e+f\,x]+i\,\text{Sin}[e+f\,x])}\;\text{Sin}[e+f\,x]\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2-$$
$$\left(\left(-2\,i\,b\,\sqrt{a^2+b^2}\,\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{1-i\,\text{Cos}[e+f\,x]+\text{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]+\right.\right.$$
$$a\left(a-i\,b+\sqrt{a^2+b^2}\right)\text{EllipticPi}\left[\frac{(1+i)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$
$$\left.\text{ArcSin}\left[\frac{\sqrt{1-i\,\text{Cos}[e+f\,x]+\text{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]+a\left(-a+i\,b+\sqrt{a^2+b^2}\right)\text{EllipticPi}\left[\right.$$
$$\left.\left.\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{1-i\,\text{Cos}[e+f\,x]+\text{Sin}[e+f\,x]}}{\sqrt{2}}\right],2\right]\right)$$
$$\sqrt{\text{Cos}\left[\frac{1}{2}(e+f\,x)\right]^2\text{Sec}[e+f\,x]}\;\sqrt{i\,\text{Cos}[e+f\,x]-\text{Sin}[e+f\,x]}$$
$$(\text{Cos}[e+f\,x]\,(i\,\text{Cos}[e+f\,x]-\text{Sin}[e+f\,x])-(\text{Cos}[e+f\,x]+i\,\text{Sin}[e+f\,x])\,\text{Sin}[e+f\,x])$$
$$\left.\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2\right)\Big/$$
$$\left(4\,(a-i\,b)\,b^2\sqrt{a^2+b^2}\sqrt{\frac{1}{1+\text{Cos}[e+f\,x]}}\;\sqrt{\text{Cos}[e+f\,x]\,(\text{Cos}[e+f\,x]+i\,\text{Sin}[e+f\,x])}\right)-$$
$$\frac{1}{2\,(a-i\,b)\,b^2\sqrt{a^2+b^2}\sqrt{\frac{1}{1+\text{Cos}[e+f\,x]}}}\sqrt{\text{Cos}\left[\frac{1}{2}(e+f\,x)\right]^2\text{Sec}[e+f\,x]}$$
$$\sqrt{i\,\text{Cos}[e+f\,x]-\text{Sin}[e+f\,x]}\;\sqrt{\text{Cos}[e+f\,x]\,(\text{Cos}[e+f\,x]+i\,\text{Sin}[e+f\,x])}$$

$$\Bigg(-\Bigg(\Big(i\,b\sqrt{a^2+b^2}\;(\text{Cos}[e+f x]+i\,\text{Sin}[e+f x])\Big)\Big/$$

$$\Big(\sqrt{2}\;\sqrt{1+\frac{1}{2}\,(-1+i\,\text{Cos}[e+f x]-\text{Sin}[e+f x])}\;\sqrt{i\,\text{Cos}[e+f x]-\text{Sin}[e+f x]}$$

$$\sqrt{1-i\,\text{Cos}[e+f x]+\text{Sin}[e+f x]}\Big)\Bigg)+\Big(a\,\big(a-i\,b+\sqrt{a^2+b^2}\big)$$

$$(\text{Cos}[e+f x]+i\,\text{Sin}[e+f x])\Big)\Big/\Bigg(2\sqrt{2}\;\sqrt{1+\frac{1}{2}\,(-1+i\,\text{Cos}[e+f x]-\text{Sin}[e+f x])}$$

$$\sqrt{i\,\text{Cos}[e+f x]-\text{Sin}[e+f x]}\;\sqrt{1-i\,\text{Cos}[e+f x]+\text{Sin}[e+f x]}$$

$$\Bigg(1-\Bigg(\Big(\frac{1}{2}+\frac{i}{2}\Big)\,\Big(a+i\,\big(-b+\sqrt{a^2+b^2}\big)\Big)\,(1-i\,\text{Cos}[e+f x]+\text{Sin}[e+f x])\Bigg)\Big/$$

$$\big(a+b-\sqrt{a^2+b^2}\big)\Bigg)\Bigg)+\Big(a\,\big(-a+i\,b+\sqrt{a^2+b^2}\big)\,(\text{Cos}[e+f x]+i\,\text{Sin}[e+f x])\Big)\Big/$$

$$\Bigg(2\sqrt{2}\;\sqrt{1+\frac{1}{2}\,(-1+i\,\text{Cos}[e+f x]-\text{Sin}[e+f x])}\;\sqrt{i\,\text{Cos}[e+f x]-\text{Sin}[e+f x]}$$

$$\sqrt{1-i\,\text{Cos}[e+f x]+\text{Sin}[e+f x]}\;\Bigg(1-\Bigg(\Big(\frac{1}{2}+\frac{i}{2}\Big)\,\Big(a-i\,\big(b+\sqrt{a^2+b^2}\big)\Big)\,\Big(1-i\,\text{Cos}[$$

$$e+f x]+\text{Sin}[e+f x]\Big)\Bigg)\Big/\big(a+b+\sqrt{a^2+b^2}\big)\Bigg)\Bigg)\Bigg)\;\Big(i+\text{Tan}\Big[\frac{1}{2}\,(e+f x)\Big]\Big)^2-$$

$$\Bigg(\Bigg(-2\,i\,b\sqrt{a^2+b^2}\;\text{EllipticF}\Big[\text{ArcSin}\Big[\frac{\sqrt{1-i\,\text{Cos}[e+f x]+\text{Sin}[e+f x]}}{\sqrt{2}}\Big],2\Big]+$$

$$a\,\big(a-i\,b+\sqrt{a^2+b^2}\big)\;\text{EllipticPi}\Big[\frac{(1+i)\,\big(a+i\,\big(-b+\sqrt{a^2+b^2}\big)\big)}{a+b-\sqrt{a^2+b^2}},$$

$$\text{ArcSin}\Big[\frac{\sqrt{1-i\,\text{Cos}[e+f x]+\text{Sin}[e+f x]}}{\sqrt{2}}\Big],2\Big]+a\,\big(-a+i\,b+\sqrt{a^2+b^2}\big)\;\text{EllipticPi}\Big[$$

$$\frac{(1+i)\,\big(a-i\,\big(b+\sqrt{a^2+b^2}\big)\big)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\Big[\frac{\sqrt{1-i\,\text{Cos}[e+f x]+\text{Sin}[e+f x]}}{\sqrt{2}}\Big],2\Big]\Bigg)$$

$$\sqrt{i\,\text{Cos}[e+f x]-\text{Sin}[e+f x]}\;\sqrt{\text{Cos}[e+f x]\,(\text{Cos}[e+f x]+i\,\text{Sin}[e+f x])}$$

$$\Big(i+\text{Tan}\Big[\frac{1}{2}\,(e+f x)\Big]\Big)^2\,\Big(-\text{Cos}\Big[\frac{1}{2}\,(e+f x)\Big]\,\text{Sec}[e+f x]\,\text{Sin}\Big[\frac{1}{2}\,(e+f x)\Big]+$$

$$\left.\left.\mathrm{Cos}\left[\frac{1}{2}(e+f x)\right]^2 \mathrm{Sec}[e+f x]\,\mathrm{Tan}[e+f x]\right)\right)\Big/$$

$$\left(4\,(a-\mathrm{i}\,b)\,b^2\sqrt{a^2+b^2}\sqrt{\frac{1}{1+\mathrm{Cos}[e+f x]}}\sqrt{\mathrm{Cos}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Sec}[e+f x]}\right)\Bigg)\Bigg)$$

Problem 612: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\frac{(d\,\mathrm{Sec}[e+f x])^{3/2}}{(a+b\,\mathrm{Tan}[e+f x])^2}\,dx$$

Optimal (type 4, 477 leaves, 17 steps):

$$\frac{a\,\mathrm{ArcTan}\left[\frac{\sqrt{b}\,(\mathrm{Sec}[e+f x]^2)^{1/4}}{(a^2+b^2)^{1/4}}\right](d\,\mathrm{Sec}[e+f x])^{3/2}}{2\sqrt{b}\,(a^2+b^2)^{5/4}\,f\,(\mathrm{Sec}[e+f x]^2)^{3/4}}-\frac{a\,\mathrm{ArcTanh}\left[\frac{\sqrt{b}\,(\mathrm{Sec}[e+f x]^2)^{1/4}}{(a^2+b^2)^{1/4}}\right](d\,\mathrm{Sec}[e+f x])^{3/2}}{2\sqrt{b}\,(a^2+b^2)^{5/4}\,f\,(\mathrm{Sec}[e+f x]^2)^{3/4}}-$$

$$\frac{\mathrm{EllipticE}\left[\frac{1}{2}\mathrm{ArcTan}[\mathrm{Tan}[e+f x]],2\right](d\,\mathrm{Sec}[e+f x])^{3/2}}{(a^2+b^2)\,f\,(\mathrm{Sec}[e+f x]^2)^{3/4}}+$$

$$\frac{\mathrm{Cos}[e+f x]\,(d\,\mathrm{Sec}[e+f x])^{3/2}\,\mathrm{Sin}[e+f x]}{(a^2+b^2)\,f}-$$

$$\left(a^2\,\mathrm{Cot}[e+f x]\,\mathrm{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[(\mathrm{Sec}[e+f x]^2)^{1/4}\right],-1\right]\right.$$

$$\left.(d\,\mathrm{Sec}[e+f x])^{3/2}\sqrt{-\mathrm{Tan}[e+f x]^2}\right)\Big/\left(2\,b\,(a^2+b^2)^{3/2}\,f\,(\mathrm{Sec}[e+f x]^2)^{3/4}\right)+$$

$$\left(a^2\,\mathrm{Cot}[e+f x]\,\mathrm{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[(\mathrm{Sec}[e+f x]^2)^{1/4}\right],-1\right](d\,\mathrm{Sec}[e+f x])^{3/2}\right.$$

$$\left.\sqrt{-\mathrm{Tan}[e+f x]^2}\right)\Big/\left(2\,b\,(a^2+b^2)^{3/2}\,f\,(\mathrm{Sec}[e+f x]^2)^{3/4}\right)-\frac{b\,(d\,\mathrm{Sec}[e+f x])^{3/2}}{(a^2+b^2)\,f\,(a+b\,\mathrm{Tan}[e+f x])}$$

Result (type 4, 31 817 leaves): Display of huge result suppressed!

Problem 613: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\frac{\sqrt{d\,\mathrm{Sec}[e+f x]}}{(a+b\,\mathrm{Tan}[e+f x])^2}\,dx$$

Optimal (type 4, 430 leaves, 17 steps):

$$-\frac{3\,a\,\sqrt{b}\,\text{ArcTan}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\sqrt{d\,\text{Sec}[e+f\,x]}}{2\,\left(a^2+b^2\right)^{7/4}\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}-\frac{3\,a\,\sqrt{b}\,\text{ArcTanh}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\sqrt{d\,\text{Sec}[e+f\,x]}}{2\,\left(a^2+b^2\right)^{7/4}\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}-\frac{\text{EllipticF}\left[\frac{1}{2}\,\text{ArcTan}[\text{Tan}[e+f\,x]],2\right]\sqrt{d\,\text{Sec}[e+f\,x]}}{\left(a^2+b^2\right)\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}+$$

$$\left(3\,a^2\,\text{Cot}[e+f\,x]\,\text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right],-1\right]\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{-\text{Tan}[e+f\,x]^2}\right)\Big/\left(2\,\left(a^2+b^2\right)^2\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right)+$$

$$\left(3\,a^2\,\text{Cot}[e+f\,x]\,\text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right],-1\right]\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{-\text{Tan}[e+f\,x]^2}\right)\Big/\left(2\,\left(a^2+b^2\right)^2\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right)-\frac{b\,\sqrt{d\,\text{Sec}[e+f\,x]}}{\left(a^2+b^2\right)\,f\,\left(a+b\,\text{Tan}[e+f\,x]\right)}$$

Result (type 4, 11 501 leaves):

$$\left(\text{Sec}[e+f\,x]^2\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)^2\left(-\frac{b}{a\,(a-i\,b)\,(a+i\,b)}+\frac{b^2\,\text{Sin}[e+f\,x]}{a\,(a-i\,b)\,(a+i\,b)\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)}\right)\right)\Big/$$

$$\left(f\,\left(a+b\,\text{Tan}[e+f\,x]\right)^2\right)+\left(\text{Sec}[e+f\,x]^{3/2}\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)^2\right.$$

$$\left(a\Big/\left((a-i\,b)\,(a+i\,b)\,\sqrt{\text{Sec}[e+f\,x]}\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)\right)-\right.$$

$$\left.\frac{b\,\sqrt{\text{Sec}[e+f\,x]}\,\text{Sin}[e+f\,x]}{2\,(a-i\,b)\,(a+i\,b)\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)}\right)\sqrt{\frac{1}{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}}$$

$$\left(2\,\text{EllipticF}\left[\text{ArcSin}\left[\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right],-1\right]\sqrt{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}+\right.$$

$$\left(3 b \left(\left(a+b-\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}}{\sqrt{2}}\right], 2\right] - (1-i) a\right.\right.$$

$$\left.\text{EllipticPi}\left[\frac{(1+i) \left(a+i \left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}}, \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}}{\sqrt{2}}\right], 2\right]\right)$$

$$\left.\sqrt{-\frac{2+2 i \text{Tan}\left[\frac{1}{2} (e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}} \left(i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)^2 \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)^2}}\right) \Big/$$

$$\left(\left(-a-b+\sqrt{a^2+b^2}\right) \left(-i a-b+\sqrt{a^2+b^2}\right) \sqrt{1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2}\right) -$$

$$\left(3 b^2 \left(\left(a+b-\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}}{\sqrt{2}}\right], 2\right] - (1-i) a\right.\right.$$

$$\left.\text{EllipticPi}\left[\frac{(1+i) \left(a+i \left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}}, \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}}{\sqrt{2}}\right], 2\right]\right)$$

$$\left.\sqrt{-\frac{2+2 i \text{Tan}\left[\frac{1}{2} (e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}} \left(i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)^2 \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)^2}}\right) \Big/$$

$$\left(\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}\right)+$$

$$\left(3\,b\left(\left(a+b+\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})\,a\right.\right.$$

$$\left.\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a-\mathrm{i}\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]\right)$$

$$\left.\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(\left(\mathrm{i}\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}\right)+$$

$$\left(3\,b^2\left(\left(a+b+\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})\,a\right.\right.$$

$$\left.\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a-\mathrm{i}\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]\right)$$

$$\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\Bigg)\Bigg/$$

$$\left(\sqrt{a^2+b^2}\,\left(i\,a+b+\sqrt{a^2+b^2}\right)\,\left(a+b+\sqrt{a^2+b^2}\right)\,\sqrt{1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)\Bigg)\Bigg)\Bigg/$$

$$\Bigg((a-i\,b)\,(a+i\,b)\,f\,\Bigg(\frac{1}{2\,(a-i\,b)\,(a+i\,b)}\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]$$

$$\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{3/2}\Bigg(2\,\text{EllipticF}\left[\text{ArcSin}\left[\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right],-1\right]$$

$$\sqrt{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}+\Bigg(3\,b\,\Bigg(\left(a+b-\sqrt{a^2+b^2}\right)$$

$$\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-i)\,a\,\text{EllipticPi}\Bigg[$$

$$\frac{(1+i)\,\left(a+i\,\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\,\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\Bigg]\Bigg)$$

$$\left.\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}{i+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2}}\right)\Big/$$

$$\left(\left(-a-b+\sqrt{a^2+b^2}\right)\left(-i\,a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)-$$

$$\left(3\,b^2\left(\left(a+b-\sqrt{a^2+b^2}\right)\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$\left(1-i\right)a\,\text{EllipticPi}\left[\frac{\left(1+i\right)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]\right)\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}{i+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}}$$

$$\left.\left(i+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2}}\right)\Big/$$

$$\left(\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-i\,a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)+$$

$$\left(3\,b\left(\left(a+b+\sqrt{a^2+b^2}\right)\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$(1-i)\, a\, \text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\right.$$

$$\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right]\right) \sqrt{-\frac{2+2\, i\, \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}$$

$$\left.\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2 \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right) \Big/ \left(\left(i\, a+b+\sqrt{a^2+b^2}\right)\right.$$

$$\left.\left(a+b+\sqrt{a^2+b^2}\right) \sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right) + \left(3\, b^2 \left(\left(a+b+\sqrt{a^2+b^2}\right)\right.\right.$$

$$\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right] - (1-i)\, a\, \text{EllipticPi}\left[\right.$$

$$\left.\left.\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}}, \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right]\right)$$

$$\left.\sqrt{-\frac{2+2\, i\, \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}} \left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2 \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right) \Big/$$

$$\left.\left(\sqrt{a^2+b^2}\,\left(i\,a+b+\sqrt{a^2+b^2}\right)\,\left(a+b+\sqrt{a^2+b^2}\right)\,\sqrt{1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)\right)+$$

$$\frac{1}{(a-i\,b)\,(a+i\,b)}\,\sqrt{\frac{1}{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}}\,\left(-\left(\left(\text{EllipticF}\left[\text{ArcSin}\left[\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right],\right.\right.\right.\right.$$

$$\left.\left.\left.-1\right]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big/\left(\sqrt{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)\right)-$$

$$\left(3\,b\,\left(\left(a+b-\sqrt{a^2+b^2}\right)\,\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$(1-i)\,a\,\text{EllipticPi}\left[\frac{(1+i)\,\left(a+i\,\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]\right)\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]$$

$$\left.\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\,\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(2\,\left(-a-b+\sqrt{a^2+b^2}\right)\,\left(-i\,a-b+\sqrt{a^2+b^2}\right)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{3/2}\right)+$$

$$\left(3 b^2 \left(\left(a+b-\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}}{\sqrt{2}}\right], 2\right] - \right.\right.$$

$$(1-i)\, a\, \text{EllipticPi}\left[\frac{(1+i) \left(a+i \left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}}{\sqrt{2}}\right], 2\right]\right) \text{Sec}\left[\frac{1}{2} (e+f x)\right]^2 \text{Tan}\left[\frac{1}{2} (e+f x)\right]$$

$$\left.\sqrt{-\frac{2+2 i\, \text{Tan}\left[\frac{1}{2} (e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}} \left(i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)^2 \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)^2}}\right) \Big/$$

$$\left(2 \sqrt{a^2+b^2} \left(-a-b+\sqrt{a^2+b^2}\right) \left(-i a-b+\sqrt{a^2+b^2}\right) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right)^{3/2}\right) -$$

$$\left(3 b \left(\left(a+b+\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}}{\sqrt{2}}\right], 2\right] - \right.\right.$$

$$(1-i)\, a\, \text{EllipticPi}\left[\frac{(1+i) \left(a-i \left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i) \left(1+\text{Tan}\left[\frac{1}{2} (e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2} (e+f x)\right]}}}{\sqrt{2}}\right], 2\right]\right) \text{Sec}\left[\frac{1}{2} (e+f x)\right]^2 \text{Tan}\left[\frac{1}{2} (e+f x)\right]$$

$$\left.\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\,\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(2\,\left(i\,a+b+\sqrt{a^2+b^2}\right)\,\left(a+b+\sqrt{a^2+b^2}\right)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{3/2}\right)-$$

$$\left(3\,b^2\,\left(\left(a+b+\sqrt{a^2+b^2}\right)\,\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$(1-i)\,a\,\text{EllipticPi}\left[\frac{(1+i)\,\left(a-i\,\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]\right)\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]$$

$$\left.\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\,\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(2\,\sqrt{a^2+b^2}\,\left(i\,a+b+\sqrt{a^2+b^2}\right)\,\left(a+b+\sqrt{a^2+b^2}\right)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{3/2}\right)+$$

$$\frac{\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\sqrt{1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}}+$$

$$\left(3\,b\,\left(\left(a+b-\sqrt{a^2+b^2}\right)\,\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$\left(1-\mathrm{i}\right)\,a\,\text{EllipticPi}\Big[\frac{\left(1+\mathrm{i}\right)\,\left(a+\mathrm{i}\,\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},$$

$$\left.\text{ArcSin}\Big[\frac{\sqrt{\frac{(1+\mathrm{i})\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\Big],\,2\Big]\right)\,\text{Sec}\Big[\frac{1}{2}\,\left(e+f\,x\right)\Big]^2$$

$$\left.\sqrt{-\frac{2+2\,\mathrm{i}\,\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}}\,\left(\mathrm{i}+\text{Tan}\Big[\frac{1}{2}\,\left(e+f\,x\right)\Big]\right)\,\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]^2}{\left(\mathrm{i}+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)^2}}\right)\Big/$$

$$\left(\left(-a-b+\sqrt{a^2+b^2}\right)\,\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\,\sqrt{1+\text{Tan}\Big[\frac{1}{2}\,\left(e+f\,x\right)\Big]^2}\right)-$$

$$\left(3\,b^2\,\left(\left(a+b-\sqrt{a^2+b^2}\right)\,\text{EllipticF}\Big[\text{ArcSin}\Big[\frac{\sqrt{\frac{(1+\mathrm{i})\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\Big],\,2\Big]-\right.\right.$$

$$\left(1-\mathrm{i}\right)\,a\,\text{EllipticPi}\Big[\frac{\left(1+\mathrm{i}\right)\,\left(a+\mathrm{i}\,\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},$$

$$\left.\text{ArcSin}\Big[\frac{\sqrt{\frac{(1+\mathrm{i})\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\Big],\,2\Big]\right)\,\text{Sec}\Big[\frac{1}{2}\,\left(e+f\,x\right)\Big]^2$$

$$\left.\sqrt{-\frac{2+2\,\mathrm{i}\,\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}}\,\left(\mathrm{i}+\text{Tan}\Big[\frac{1}{2}\,\left(e+f\,x\right)\Big]\right)\,\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]^2}{\left(\mathrm{i}+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)^2}}\right)\Big/$$

$$\left(\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)+$$

$$\left(3\,b\left(\left(a+b+\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$(1-\mathrm{i})\,a\,\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a-\mathrm{i}\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]\right)\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2$$

$$\left.\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}}\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2}}\right)\Big/$$

$$\left(\left(\mathrm{i}\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)+$$

$$\left(3\,b^2\left(\left(a+b+\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$(1-\mathrm{i})\,a\,\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a-\mathrm{i}\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\right.$$

$$\left.\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]\right)\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\left.\sqrt{-\frac{2+2\,i\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right)\Big/$$

$$\left(\sqrt{a^2+b^2}\left(i\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)+$$

$$\left(3\,b\left(\left(a+b-\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]-(1-i)\right.\right.$$

$$a\,\mathrm{EllipticPi}\left[\frac{(1+i)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.\left.2\right]\right)\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}$$

$$\left.\left(\frac{\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(2+2\,i\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{2\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{i\,\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)\right)\Big/$$

$$\left(2\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathbb{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{-\frac{2+2\,\mathbb{i}\,\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}{\mathbb{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}}\right.$$

$$\left.\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)-$$

$$\left(3\,b^2\left(\left(a+b-\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathbb{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathbb{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathbb{i})\right.\right.$$

$$a\,\mathrm{EllipticPi}\left[\frac{(1+\mathbb{i})\left(a+\mathbb{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathbb{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathbb{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.\left.2\right]\right)\left(\mathbb{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}{\left(\mathbb{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2}}$$

$$\left.\left(\frac{\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\left(2+2\,\mathbb{i}\,\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)}{2\left(\mathbb{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2}-\frac{\mathbb{i}\,\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}{\mathbb{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}\right)\right)\Big/$$

$$\left(2\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathbb{i}\,a-b+\sqrt{a^2+b^2}\right)\right.$$

$$\left.\sqrt{-\frac{2+2\,\mathbb{i}\,\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}{\mathbb{i}+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}}\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)+$$

$$\Bigg(3\,b\,\Bigg(\left(a+b+\sqrt{a^2+b^2}\right)\text{EllipticF}\Big[\text{ArcSin}\Big[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\Big],2\Big]-(1-i)$$

$$a\,\text{EllipticPi}\Big[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\Big[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\Big],$$

$$2\Big]\Bigg)\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2}}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2\left(2+2\,i\,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{2\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2}-\frac{i\,\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}\right)\Bigg)\Bigg/$$

$$\Bigg(2\left(i\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}$$

$$\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}\Bigg)+$$

$$\Bigg(3\,b^2\Bigg(\left(a+b+\sqrt{a^2+b^2}\right)\text{EllipticF}\Big[\text{ArcSin}\Big[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\Big],2\Big]-(1-i)$$

$$a\,\text{EllipticPi}\Big[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\Big[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\Big],$$

$$2\Big]\Bigg)\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}$$

$$\left(\left(\frac{\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\left(2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}-\frac{\mathrm{i}\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}\right)\right)\Bigg/$$

$$\Bigg(2\sqrt{a^2+b^2}\left(\mathrm{i}\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)$$

$$\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\Bigg)+$$

$$\Bigg(3\,b\,\Bigg(\left(a+b-\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})$$

$$a\,\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a+\mathrm{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],\right.$$

$$2\Big]\Bigg)\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2$$

$$\left(\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\left(\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}{\left(\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3}\right)\right)\Big/$$

$$\left(2\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\text{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right.$$

$$\left.\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)-$$

$$\left(3\,b^2\left(\left(a+b-\sqrt{a^2+b^2}\right)\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+\text{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\text{i})\right.\right.$$

$$a\,\text{EllipticPi}\left[\frac{(1+\text{i})\left(a+\text{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{\frac{(1+\text{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.\left.2\right]\right)\sqrt{-\frac{2+2\,\text{i}\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2$$

$$\left(\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\left(\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}{\left(\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3}\right)\right)\Big/$$

$$\left(2\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\text{i}\,a-b+\sqrt{a^2+b^2}\right)\right.$$

$$\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\ \sqrt{1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\Bigg)+$$

$$\Bigg(3\,b\Bigg(\left(a+b+\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})$$

$$a\,\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a-\mathrm{i}\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],$$

$$2\Bigg]\Bigg)\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}\ \left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2$$

$$\left(\frac{\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3}\right)\Bigg)\Big/$$

$$\Bigg(2\left(\mathrm{i}\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}$$

$$\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\Bigg)+$$

$$\Bigg(3\,b^2\Bigg(\left(a+b+\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})$$

$$\text{a EllipticPi}\left[\frac{(1+\mathbb{i})\left(a-\mathbb{i}\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\ \text{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathbb{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.2\right]\Bigg)\sqrt{-\frac{2+2\,\mathbb{i}\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}{\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3}\right)\Bigg)\Bigg/$$

$$\Bigg(2\sqrt{a^2+b^2}\left(\mathbb{i}\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)$$

$$\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\Bigg)+$$

$$\Bigg(3\,b\sqrt{-\frac{2+2\,\mathbb{i}\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}$$

$$\Bigg(\Bigg(\left(a+b-\sqrt{a^2+b^2}\right)\left(\frac{\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}-\left(\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right.\right.$$

$$\left.\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Bigg/\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)\Bigg)\Bigg/$$

$$\Bigg(2\sqrt{2}\sqrt{\frac{(1+\mathbb{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\sqrt{1-\frac{(1+\mathbb{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\Bigg)-$$

$$\left(\left(\frac{1}{2}-\frac{i}{2}\right) a \left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right) \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right) \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right.\right.\right.$$

$$\left.\left.\left.\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)\right)\Big/$$

$$\left(\sqrt{2}\sqrt{\frac{(1+i)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}\sqrt{1-\frac{(1+i)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right.$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(1-\left(i\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)\left(1+\operatorname{Tan}\left[\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left.\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(\left(a+b-\sqrt{a^2+b^2}\right)\left(i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\Big/$$

$$\left(\left(-a-b+\sqrt{a^2+b^2}\right)\left(-i a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)-$$

$$\left(3 b^2\sqrt{-\frac{2+2 i \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right.$$

$$\left(\left(\left(a+b-\sqrt{a^2+b^2}\right)\left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right) \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right) \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right.\right.\right.\right.$$

$$\left.\left.\left.\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)\right)\Big/$$

$$\left(2\sqrt{2}\sqrt{\frac{(1+i)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}\sqrt{1-\frac{(1+i)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right.$$

$$\left.\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right)-$$

$$\left(\left(\frac{1}{2}-\frac{i}{2}\right) a \left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right) \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{i+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right) \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right.\right.\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)\right)\Big/$$

$$\left(\sqrt{2}\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\sqrt{1-\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right.$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(1-\left(i\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)\left(1+\text{Tan}\left[\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(\left(a+b-\sqrt{a^2+b^2}\right)\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\right)\Big/$$

$$\left(\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-i a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)+$$

$$\left(3 b\sqrt{-\frac{2+2 i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right.$$

$$\left(\left(\left(a+b+\sqrt{a^2+b^2}\right)\left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right.\right.\right.\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)\right)\Big/$$

$$\left(2\sqrt{2}\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\sqrt{1-\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right.$$

$$\left.\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right)-$$

$$\left(\left(\frac{1}{2}-\frac{i}{2}\right)a\left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right.\right.\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)\right)\Big/$$

$$\left(\sqrt{2}\sqrt{\frac{(1+i)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}}\sqrt{1-\frac{(1+i)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}}\right.$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}}\left(1-\left(i\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)\left(1+\operatorname{Tan}\left[\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left.\frac{1}{2}(e+fx)\right]\right)\right)\Big/\left(\left(a+b+\sqrt{a^2+b^2}\right)\left(i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\right)\Big/$$

$$\left(\left(i\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)+$$

$$\left(3\,b^2\sqrt{-\frac{2+2\,i\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}{i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}}\left(i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^2\sqrt{\frac{-1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2}{\left(i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^2}}\right.$$

$$\left(\left(\left(a+b+\sqrt{a^2+b^2}\right)\left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\operatorname{Sec}\left[\frac{1}{2}(e+fx)\right]^2}{i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right)\operatorname{Sec}\left[\frac{1}{2}(e+fx)\right]^2\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\Big/\left(i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^2\right)\right)\Big/$$

$$\left(2\sqrt{2}\sqrt{\frac{(1+i)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}}\sqrt{1-\frac{(1+i)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}}\right.$$

$$\left.\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}}\right)-$$

$$\left(\left(\frac{1}{2}-\frac{i}{2}\right)a\left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\operatorname{Sec}\left[\frac{1}{2}(e+fx)\right]^2}{i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right)\operatorname{Sec}\left[\frac{1}{2}(e+fx)\right]^2\right.\right.\right.$$

$$\left.\left.\left.\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\Big/\left(i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^2\right)\right)\Big/$$

$$\left(\sqrt{2}\sqrt{\frac{(1+i)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}}\sqrt{1-\frac{(1+i)\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]}}\right.$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}}$$

$$\left(1-\left(i\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(\left(a+b+\sqrt{a^2+b^2}\right)\right.\right.$$

$$\left.\left.\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\Big/\left(\sqrt{a^2+b^2}\left(i\,a+b+\sqrt{a^2+b^2}\right)\right.$$

$$\left.\left.\left.\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)\right)\left(a+b\,\mathrm{Tan}[e+f x]\right)^2\right)$$

Problem 614: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\frac{1}{\sqrt{d\,\mathrm{Sec}[e+f x]}\,\left(a+b\,\mathrm{Tan}[e+f x]\right)^2}\,dx$$

Optimal (type 4, 555 leaves, 18 steps):

$$\frac{5\,a\,b^{3/2}\,\text{ArcTan}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{2\,\left(a^2+b^2\right)^{9/4}\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}}-$$

$$\frac{5\,a\,b^{3/2}\,\text{ArcTanh}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{2\,\left(a^2+b^2\right)^{9/4}\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}}+$$

$$\left(\left(2\,a^2-3\,b^2\right)\,\text{EllipticE}\left[\frac{1}{2}\,\text{ArcTan}[\text{Tan}[e+f\,x]],\,2\right]\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right)\Big/$$

$$\left(\left(a^2+b^2\right)^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\right)-\frac{\left(2\,a^2-3\,b^2\right)\,\text{Tan}[e+f\,x]}{\left(a^2+b^2\right)^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}}-$$

$$\left(5\,a^2\,b\,\text{Cot}[e+f\,x]\,\text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\,\text{ArcSin}\left[\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right],\,-1\right]\right.$$

$$\left.\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\,\sqrt{-\text{Tan}[e+f\,x]^2}\right)\Big/\left(2\,\left(a^2+b^2\right)^{5/2}\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\right)+$$

$$\left(5\,a^2\,b\,\text{Cot}[e+f\,x]\,\text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\,\text{ArcSin}\left[\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right],\,-1\right]\right.$$

$$\left.\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\,\sqrt{-\text{Tan}[e+f\,x]^2}\right)\Big/\left(2\,\left(a^2+b^2\right)^{5/2}\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\right)+$$

$$\frac{b\,\left(2\,a^2-3\,b^2\right)\,\text{Sec}[e+f\,x]^2}{\left(a^2+b^2\right)^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\left(a+b\,\text{Tan}[e+f\,x]\right)}+\frac{2\,\left(b+a\,\text{Tan}[e+f\,x]\right)}{\left(a^2+b^2\right)\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\left(a+b\,\text{Tan}[e+f\,x]\right)}$$

Result (type 4, 33 334 leaves): Display of huge result suppressed!

Problem 615: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{1}{\left(d\,\text{Sec}[e+f\,x]\right)^{3/2}\,\left(a+b\,\text{Tan}[e+f\,x]\right)^2}\,dx$$

Optimal (type 4, 520 leaves, 18 steps):

$$-\frac{7\,a\,b^{5/2}\,\text{ArcTan}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\left(\text{Sec}[e+f\,x]^2\right)^{3/4}}{2\,\left(a^2+b^2\right)^{11/4}\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{3/2}}-$$

$$\frac{7\,a\,b^{5/2}\,\text{ArcTanh}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\left(\text{Sec}[e+f\,x]^2\right)^{3/4}}{2\,\left(a^2+b^2\right)^{11/4}\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{3/2}}+$$

$$\left(\left(2\,a^2-5\,b^2\right)\,\text{EllipticF}\left[\frac{1}{2}\,\text{ArcTan}[\text{Tan}[e+f\,x]],\,2\right]\,\left(\text{Sec}[e+f\,x]^2\right)^{3/4}\right)\Big/$$
$$\left(3\,\left(a^2+b^2\right)^2\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{3/2}\right)+$$

$$\left(7\,a^2\,b^2\,\text{Cot}[e+f\,x]\,\text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\,\text{ArcSin}\left[\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right],\,-1\right]\right.$$
$$\left.\left(\text{Sec}[e+f\,x]^2\right)^{3/4}\sqrt{-\text{Tan}[e+f\,x]^2}\right)\Big/\left(2\,\left(a^2+b^2\right)^3\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{3/2}\right)+$$

$$\left(7\,a^2\,b^2\,\text{Cot}[e+f\,x]\,\text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\,\text{ArcSin}\left[\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right],\,-1\right]\right.$$
$$\left.\left(\text{Sec}[e+f\,x]^2\right)^{3/4}\sqrt{-\text{Tan}[e+f\,x]^2}\right)\Big/\left(2\,\left(a^2+b^2\right)^3\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{3/2}\right)+$$

$$\frac{b\,\left(2\,a^2-5\,b^2\right)\,\text{Sec}[e+f\,x]^2}{3\,\left(a^2+b^2\right)^2\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{3/2}\,\left(a+b\,\text{Tan}[e+f\,x]\right)}+$$
$$\frac{2\,\left(b+a\,\text{Tan}[e+f\,x]\right)}{3\,\left(a^2+b^2\right)\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{3/2}\,\left(a+b\,\text{Tan}[e+f\,x]\right)}$$

Result (type 4, 11 962 leaves):

$$\left(\text{Sec}[e+f\,x]^4\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)^2\,\left(\frac{b\,\left(2\,a^2-3\,b^2\right)}{3\,a\,\left(a-\mathbb{i}\,b\right)^2\,\left(a+\mathbb{i}\,b\right)^2}+\frac{2\,a\,b\,\text{Cos}\left[2\,\left(e+f\,x\right)\right]}{3\,\left(a-\mathbb{i}\,b\right)^2\,\left(a+\mathbb{i}\,b\right)^2}+\right.\right.$$
$$\left.\left.\frac{b^4\,\text{Sin}[e+f\,x]}{a\,\left(a-\mathbb{i}\,b\right)^2\,\left(a+\mathbb{i}\,b\right)^2\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)}+\frac{\left(a^2-b^2\right)\,\text{Sin}\left[2\,\left(e+f\,x\right)\right]}{3\,\left(a-\mathbb{i}\,b\right)^2\,\left(a+\mathbb{i}\,b\right)^2}\right)\right)\Big/$$

$$\left(f\,\left(d\,\text{Sec}[e+f\,x]\right)^{3/2}\,\left(a+b\,\text{Tan}[e+f\,x]\right)^2\right)+\left(2\,\text{Sec}[e+f\,x]^{7/2}\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)^2\right.$$

$$\left(a^3\Big/\left(3\,\left(a-\mathbb{i}\,b\right)^2\,\left(a+\mathbb{i}\,b\right)^2\,\sqrt{\text{Sec}[e+f\,x]}\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)\right)+\right.$$
$$\left(8\,a\,b^2\right)\Big/\left(3\,\left(a-\mathbb{i}\,b\right)^2\,\left(a+\mathbb{i}\,b\right)^2\,\sqrt{\text{Sec}[e+f\,x]}\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)\right)+$$
$$\frac{a^2\,b\,\sqrt{\text{Sec}[e+f\,x]}\,\text{Sin}[e+f\,x]}{3\,\left(a-\mathbb{i}\,b\right)^2\,\left(a+\mathbb{i}\,b\right)^2\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)}-$$

$$\left.\frac{5\,b^3\,\sqrt{\mathrm{Sec}[e+f\,x]}\;\mathrm{Sin}[e+f\,x]}{6\,(a-\mathrm{i}\,b)^2\,(a+\mathrm{i}\,b)^2\,(a\,\mathrm{Cos}[e+f\,x]+b\,\mathrm{Sin}[e+f\,x])}\right)\sqrt{\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}}$$

$$\left(a^2\,\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right],-1\right]\sqrt{1-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\;+\right.$$

$$8\,b^2\,\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right],-1\right]\sqrt{1-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\;+$$

$$\left(21\,b^4\left(\left(a+b+\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})\,a\right.\right.$$

$$\left.\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a-\mathrm{i}\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]\right)$$

$$\left.\sqrt{-\frac{1+\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(\sqrt{2}\,\sqrt{a^2+b^2}\left(\mathrm{i}\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)+$$

$$\left(21\,b^3\left(\left(a+b-\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})\,a\right.\right.$$

$$\left.\text{EllipticPi}\left[\frac{(1+i)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\ \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\ 2\right]\right)$$

$$\left.\sqrt{-\frac{2+2 i\, \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right)\Big/$$

$$\left(2\left(-a-b+\sqrt{a^2+b^2}\right)\left(-i a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)-$$

$$\left(21 b^4\left(\left(a+b-\sqrt{a^2+b^2}\right)\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\ 2\right]-(1-i)\, a\right.\right.$$

$$\left.\text{EllipticPi}\left[\frac{(1+i)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\ \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\ 2\right]\right)$$

$$\left.\sqrt{-\frac{2+2 i\, \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right)\Big/$$

$$\left(2\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-i a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)+$$

$$\left(21\, b^3 \left(\left(a+b+\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right] - (1-i)\, a\right.\right.$$

$$\left.\text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}}, \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right]\right)$$

$$\left.\sqrt{-\frac{2+2\, i\, \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}} \left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2 \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right) \Big/$$

$$\left.\left.\left(2\left(i\, a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)\right)\right) \Big/ \left(3\left(a^2+b^2\right)^2 f\right.$$

$$(d\, \text{Sec}[e+f x])^{3/2} \left(\frac{1}{3\left(a^2+b^2\right)^2} \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{3/2}\right.$$

$$\left(a^2\, \text{EllipticF}\left[\text{ArcSin}\left[\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right], -1\right] \sqrt{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2} +\right.$$

$$8\, b^2\, \text{EllipticF}\left[\text{ArcSin}\left[\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right], -1\right] \sqrt{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2} +$$

$$\left(21\, b^4 \left(\left(a+b+\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right] - (1-i)\, a\right.\right.$$

$$\text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}}, \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.\left.2\right]\right) \sqrt{-\frac{1+i\, \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}} \left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2$$

$$\left.\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right) \Bigg/ \left(\sqrt{2}\, \sqrt{a^2+b^2} \left(i\, a+b+\sqrt{a^2+b^2}\right)\right.$$

$$\left.\left(a+b+\sqrt{a^2+b^2}\right) \sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right) + \left(21\, b^3 \left(\left(a+b-\sqrt{a^2+b^2}\right)\right.\right.$$

$$\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right] - (1-i)\, a\, \text{EllipticPi}\left[\right.$$

$$\left.\left.\frac{(1+i)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}}, \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right]\right)$$

$$\left.\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Bigg/$$

$$\left(2\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)-$$

$$\left(21\,b^4\left(\left(a+b-\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})\right.\right.$$

$$a\,\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a+\mathrm{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.2\right]\Bigg)\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2$$

$$\left.\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Bigg/\left(2\sqrt{a^2+b^2}\,\left(-a-b+\sqrt{a^2+b^2}\right)\right.$$

$$\left.\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)+\left(21\,b^3\left(\left(a+b+\sqrt{a^2+b^2}\right)\right.\right.$$

$$\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]-(1-i)\,a\,\text{EllipticPi}\left[\right.$$

$$\left.\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]\Bigg)$$

$$\left(\sqrt{-\frac{2+2\,i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right)\Bigg/$$

$$\left(2\left(i\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)\Bigg)+$$

$$\frac{1}{3\left(a^2+b^2\right)^2}\,2\sqrt{\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}}\left(-\left(\left(a^2\,\text{EllipticF}\left[\text{ArcSin}\left[\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right],\right.\right.\right.\right.$$

$$\left.\left.\left.-1\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg/\left(2\sqrt{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)\right)-$$

$$\left(4\,b^2\,\text{EllipticF}\left[\text{ArcSin}\left[\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right],-1\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg/$$

$$\left(\sqrt{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)-$$

$$\left(21\, b^4 \left(\left(a+b+\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right] - \left(1-i\right) a\, \text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}}, \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right]\right) \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] \sqrt{-\frac{1+i\, \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}} \left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2 \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right) \Big/$$

$$\left(2\sqrt{2}\sqrt{a^2+b^2}\left(i\, a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{3/2}\right) -$$

$$\left(21\, b^3 \left(\left(a+b-\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right] - \left(1-i\right) a\, \text{EllipticPi}\left[\frac{(1+i)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}}, \text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right]\right) \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]$$

$$\left.\sqrt{-\frac{2+2\,i\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\,\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(4\,\left(-a-b+\sqrt{a^2+b^2}\right)\,\left(-i\,a-b+\sqrt{a^2+b^2}\right)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{3/2}\right)+$$

$$\left(21\,b^4\,\left(\left(a+b-\sqrt{a^2+b^2}\right)\,\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],\,2\right]-\right.\right.$$

$$(1-i)\,a\,\mathrm{EllipticPi}\left[\frac{(1+i)\,\left(a+i\,\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],\,2\right]\right)\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]$$

$$\left.\sqrt{-\frac{2+2\,i\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\,\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(4\,\sqrt{a^2+b^2}\,\left(-a-b+\sqrt{a^2+b^2}\right)\,\left(-i\,a-b+\sqrt{a^2+b^2}\right)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{3/2}\right)-$$

$$\left(21\,b^3\,\left(\left(a+b+\sqrt{a^2+b^2}\right)\,\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],\,2\right]-\right.\right.$$

$$(1-i)\,a\,\mathrm{EllipticPi}\left[\frac{(1+i)\,\left(a-i\,\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\right.$$

$$\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+\text{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]$$

$$\left.\sqrt{-\frac{2+2\,\text{i}\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right)\Big/$$

$$\left(4\left(\text{i}\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{3/2}\right)+$$

$$\frac{a^2\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}}+\frac{4\,b^2\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}}+$$

$$\left(21\,b^4\left(\left(a+b+\sqrt{a^2+b^2}\right)\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+\text{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$(1-\text{i})\,a\,\text{EllipticPi}\left[\frac{(1+\text{i})\left(a-\text{i}\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+\text{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\left.\sqrt{-\frac{1+\text{i}\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(\text{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right)\Big/$$

$$\left(\sqrt{2}\,\sqrt{a^2+b^2}\,\left(\mathrm{i}\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)+$$

$$\left(21\,b^3\left(\left(a+b-\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$(1-\mathrm{i})\,a\,\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\,\left(a+\mathrm{i}\,\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]\right)\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2$$

$$\left.\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right)\Big/$$

$$\left(2\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)-$$

$$\left(21\,b^4\left(\left(a+b-\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-\right.\right.$$

$$(1-\mathrm{i})\,a\,\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\,\left(a+\mathrm{i}\,\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\right.$$

$$\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right]\right) \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\left.\sqrt{-\frac{2+2 i \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}} \left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right) \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right) \Big/$$

$$\left(2 \sqrt{a^2+b^2} \left(-a-b+\sqrt{a^2+b^2}\right) \left(-i a-b+\sqrt{a^2+b^2}\right) \sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right) +$$

$$\left(21 b^3 \left(\left(a+b+\sqrt{a^2+b^2}\right) \text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right] -\right.\right.$$

$$(1-i)\, a\, \text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\right.$$

$$\left.\left.\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right]\right) \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\left.\sqrt{-\frac{2+2 i \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}} \left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right) \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right) \Big/$$

$$\left(2 \left(i a+b+\sqrt{a^2+b^2}\right) \left(a+b+\sqrt{a^2+b^2}\right) \sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right) +$$

$$\Bigg(21\,b^4\Bigg(\left(a+b+\sqrt{a^2+b^2}\right)\,\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-i)$$

$$a\,\text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],$$

$$2\Bigg]\Bigg)\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2}}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2\left(1+i\,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{2\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^2}-\frac{i\,\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2}{2\left(i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}\right)\Bigg)\Bigg/$$

$$\Bigg(2\sqrt{2}\,\sqrt{a^2+b^2}\left(i\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)$$

$$\sqrt{-\frac{1+i\,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}\,\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}\Bigg)+$$

$$\Bigg(21\,b^3\Bigg(\left(a+b-\sqrt{a^2+b^2}\right)\,\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-i)$$

$$a\,\text{EllipticPi}\left[\frac{(1+i)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}}}{\sqrt{2}}\right],$$

$$2\Big]\Bigg)\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}$$

$$\left(\left(\frac{\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\left(2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{2\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}-\frac{\mathrm{i}\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}\right)\right)\Big/$$

$$\left(4\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\right.$$

$$\left.\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)-$$

$$\Bigg(21\,b^4\Bigg(\left(a+b-\sqrt{a^2+b^2}\right)\mathrm{EllipticF}\left[\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})$$

$$a\,\mathrm{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a+\mathrm{i}\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\mathrm{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}}{\sqrt{2}}\right],\right.$$

$$2\Big]\Bigg)\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(2+2 i \,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{2\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{i\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)\Bigg)\Big/$$

$$\left(4\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-i a-b+\sqrt{a^2+b^2}\right)\sqrt{-\frac{2+2 i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)+$$

$$\Bigg(21 b^3\Bigg(\left(a+b+\sqrt{a^2+b^2}\right)\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]-(1-i)$$

$$a\,\text{EllipticPi}\left[\frac{(1+i)\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],$$

$$2\Big]\Bigg)\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(2+2 i \,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{2\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{i\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)\Bigg)\Big/$$

$$\left(4\left(i a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{-\frac{2+2 i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\right.$$

$$\left.\sqrt{1+\operatorname{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}}\right)+$$

$$\left(21 b^{4}\left(\left(a+b+\sqrt{a^{2}+b^{2}}\right) \operatorname{EllipticF}\left[\operatorname{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right]-(1-\mathrm{i})\right.\right.$$

$$a \operatorname{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a-\mathrm{i}\left(b+\sqrt{a^{2}+b^{2}}\right)\right)}{a+b+\sqrt{a^{2}+b^{2}}}, \operatorname{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.\left.2\right]\right) \sqrt{-\frac{1+\mathrm{i} \operatorname{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}{\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}}\left(\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^{2}$$

$$\left.\left(\frac{\operatorname{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^{2} \operatorname{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}{\left(\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^{2}}-\frac{\operatorname{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\left(-1+\operatorname{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\right)}{\left(\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^{3}}\right)\right) \Big/$$

$$\left(2 \sqrt{2} \sqrt{a^{2}+b^{2}}\left(\mathrm{i} a+b+\sqrt{a^{2}+b^{2}}\right)\left(a+b+\sqrt{a^{2}+b^{2}}\right)\right.$$

$$\left.\sqrt{\frac{-1+\operatorname{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}}{\left(\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^{2}}} \sqrt{1+\operatorname{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}}\right)+$$

$$\left(21 b^{3}\left(\left(a+b-\sqrt{a^{2}+b^{2}}\right) \operatorname{EllipticF}\left[\operatorname{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right], 2\right]-(1-\mathrm{i})\right.\right.$$

$$a\,\text{EllipticPi}\left[\frac{(1+i)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.2\right]\right)\sqrt{-\frac{2+2 i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2$$

$$\left.\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3}\right)\right)\Big/$$

$$\left(4\left(-a-b+\sqrt{a^2+b^2}\right)\left(-i a-b+\sqrt{a^2+b^2}\right)\sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right.$$

$$\left.\sqrt{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)-$$

$$\left(21 b^4\left(\left(a+b-\sqrt{a^2+b^2}\right)\text{EllipticF}\left[\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]-(1-i)\right.\right.$$

$$a\,\text{EllipticPi}\left[\frac{(1+i)\left(a+i\left(-b+\sqrt{a^2+b^2}\right)\right)}{a+b-\sqrt{a^2+b^2}},\text{ArcSin}\left[\frac{\sqrt{\frac{(1+i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.2\right]\right)\sqrt{-\frac{2+2 i\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2$$

$$\left.\left(\frac{\operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}{\left(\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{\operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}{\left(\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3}\right)\right) \Big/$$

$$\left(4\sqrt{a^2+b^2}\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\right.$$

$$\left.\sqrt{\frac{-1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\sqrt{1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)+$$

$$\left(21\,b^3\left(\left(a+b+\sqrt{a^2+b^2}\right)\operatorname{EllipticF}\left[\operatorname{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],2\right]-(1-\mathrm{i})\right.\right.$$

$$a\operatorname{EllipticPi}\left[\frac{(1+\mathrm{i})\left(a-\mathrm{i}\left(b+\sqrt{a^2+b^2}\right)\right)}{a+b+\sqrt{a^2+b^2}},\operatorname{ArcSin}\left[\frac{\sqrt{\frac{(1+\mathrm{i})\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}}{\sqrt{2}}\right],\right.$$

$$\left.\left.2\right]\right)\sqrt{-\frac{2+2\,\mathrm{i}\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}{\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}}\left(\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2$$

$$\left.\left(\frac{\operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]}{\left(\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\frac{\operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}{\left(\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3}\right)\right) \Big/$$

$$\left(4\left(\mathrm{i}\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{\frac{-1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(\mathrm{i}+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}}\right.$$

$$\sqrt{1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}\Bigg)+$$

$$\left(21\, b^3 \sqrt{-\frac{2+2\,\mathrm{i}\,\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}}\left(\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^2 \sqrt{\frac{-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}{\left(\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^2}}\right.$$

$$\left(\left(\left(a+b-\sqrt{a^2+b^2}\right)\left(\frac{\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}-\left(\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right.\right.\right.\right.$$

$$\left.\left.\left.\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\right)\Big/\left(\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^2\right)\right)\Big/$$

$$\left(2\sqrt{2}\sqrt{\frac{\left(1+\mathrm{i}\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}}\sqrt{1-\frac{\left(1+\mathrm{i}\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}}\right.$$

$$\left.\sqrt{1-\frac{\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}}\right)-$$

$$\left(\left(\frac{1}{2}-\frac{\mathrm{i}}{2}\right)a\left(\frac{\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}-\left(\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right.\right.\right.$$

$$\left.\left.\left.\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\right)\Big/\left(\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^2\right)\right)\Big/$$

$$\left(\sqrt{2}\sqrt{\frac{\left(1+\mathrm{i}\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}}\sqrt{1-\frac{\left(1+\mathrm{i}\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}}\right.$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)}{\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}}\left(1-\left(\mathrm{i}\left(a+\mathrm{i}\left(-b+\sqrt{a^2+b^2}\right)\right)\left(1+\text{Tan}\left[\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left.\left.\frac{1}{2}\left(e+f x\right)\right]\right)\right)\Big/\left(\left(a+b-\sqrt{a^2+b^2}\right)\left(\mathrm{i}+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\right)\right)\right)\right)\Big/$$

$$\left(2\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}\right)-$$

$$\left(21\,b^4\sqrt{-\frac{2+2\,\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right.$$

$$\left(\left(\left(a+b-\sqrt{a^2+b^2}\right)\left(\frac{\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}-\left(\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right.\right.\right.\right.$$

$$\left.\left.\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\Big/\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\right)\right)\Big/$$

$$\left(2\sqrt{2}\,\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\sqrt{1-\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\right.$$

$$\left.\sqrt{1-\frac{\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\right)-$$

$$\left(\left(\frac{1}{2}-\frac{\mathrm{i}}{2}\right)a\left(\frac{\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}-\left(\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right.\right.\right.$$

$$\left.\left.\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\Big/\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\right)\right)\Big/$$

$$\left(\sqrt{2}\,\sqrt{\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\sqrt{1-\frac{(1+\mathrm{i})\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\right.$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{\mathrm{i}}{2}\right)\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(1-\left(\mathrm{i}\left(a+\mathrm{i}\left(-b+\sqrt{a^2+b^2}\right)\right)\left(1+\mathrm{Tan}\left[\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left.\left.\frac{1}{2}\,(e+f\,x)\right]\right)\right)\Big/\left(\left(a+b-\sqrt{a^2+b^2}\right)\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\right)\right)\right)\Big/$$

$$\left(2\sqrt{a^2+b^2}\,\left(-a-b+\sqrt{a^2+b^2}\right)\left(-\mathrm{i}\,a-b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)+$$

$$\left(21\,b^4\sqrt{-\frac{1+\mathrm{i}\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2}}\right.$$

$$\left(\left(\left(a+b+\sqrt{a^2+b^2}\right)\left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2}{i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\right.\right.\right.\right.$$

$$\left.\left.\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\Big/\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^2\right)\right)\Big/$$

$$\left(2\sqrt{2}\sqrt{\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}}\sqrt{1-\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}}\right.$$

$$\left.\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}}\right)-$$

$$\left(\left(\frac{1}{2}-\frac{i}{2}\right)a\left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2}{i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\right.\right.\right.$$

$$\left.\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\Big/\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^2\right)\Big/$$

$$\left(\sqrt{2}\sqrt{\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}}\sqrt{1-\frac{(1+i)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}}\right.$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}}\left(1-\left(i\left(a-i\left(b+\sqrt{a^2+b^2}\right)\right)\left(1+\mathrm{Tan}\left[\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left.\left.\left.\frac{1}{2}(e+fx)\right]\right)\right)\Big/\left(\left(a+b+\sqrt{a^2+b^2}\right)\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\right)\right)\right)\Big/$$

$$\left(\sqrt{2}\sqrt{a^2+b^2}\left(i\,a+b+\sqrt{a^2+b^2}\right)\left(a+b+\sqrt{a^2+b^2}\right)\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)+$$

$$\left(21\,b^3\sqrt{-\frac{2+2\,i\,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}{i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}}\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^2\sqrt{\frac{-1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2}{\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^2}}\right.$$

$$\left(\left(\left(a+b+\sqrt{a^2+b^2}\right)\left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2}{i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\right.\right.\right.\right.$$

$$\left.\left.\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\right)\Big/\left(i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\right)\right)\Big/$$

$$\left(2\,\sqrt{2}\,\sqrt{\frac{(1+i)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\sqrt{1-\frac{(1+i)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\right.$$

$$\left.\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\right)-$$

$$\left(\left(\frac{1}{2}-\frac{i}{2}\right)\,a\,\left(\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}-\left(\left(\frac{1}{2}+\frac{i}{2}\right)\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right.\right.\right.$$

$$\left.\left.\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\Big/\left(i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\right)\right)\Big/$$

$$\left(\sqrt{2}\,\sqrt{\frac{(1+i)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\sqrt{1-\frac{(1+i)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\right.$$

$$\sqrt{1-\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}}\,\left(1-\left(i\,\left(a-i\,\left(b+\sqrt{a^2+b^2}\right)\right)\,\left(1+\mathrm{Tan}\left[\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left.\left.\frac{1}{2}\,(e+f\,x)\right]\right)\right)\Big/\left(\left(a+b+\sqrt{a^2+b^2}\right)\,\left(i+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\right)\right)\right)\Big/$$

$$\left.\left.\left(2\,\left(i\,a+b+\sqrt{a^2+b^2}\right)\,\left(a+b+\sqrt{a^2+b^2}\right)\,\sqrt{1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)\right)\right)\,\left(a+b\,\mathrm{Tan}[e+\right.$$

$$\left.f\,x]\right)^2\Bigg)$$

Problem 616: Result unnecessarily involves complex numbers and more than

twice size of optimal antiderivative.

$$\int \frac{1}{(d\,\text{Sec}[e+f\,x])^{5/2}\,(a+b\,\text{Tan}[e+f\,x])^2}\,dx$$

Optimal (type 4, 700 leaves, 19 steps):

$$\frac{9\,a\,b^{7/2}\,\text{ArcTan}\left[\frac{\sqrt{b}\,(\text{Sec}[e+f\,x]^2)^{1/4}}{(a^2+b^2)^{1/4}}\right]\,(\text{Sec}[e+f\,x]^2)^{1/4}}{2\,(a^2+b^2)^{13/4}\,d^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}}-\frac{9\,a\,b^{7/2}\,\text{ArcTanh}\left[\frac{\sqrt{b}\,(\text{Sec}[e+f\,x]^2)^{1/4}}{(a^2+b^2)^{1/4}}\right]\,(\text{Sec}[e+f\,x]^2)^{1/4}}{2\,(a^2+b^2)^{13/4}\,d^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}}+$$
$$\left(3\,(2\,a^4+10\,a^2\,b^2-7\,b^4)\,\text{EllipticE}\left[\frac{1}{2}\,\text{ArcTan}[\text{Tan}[e+f\,x]],\,2\right]\,(\text{Sec}[e+f\,x]^2)^{1/4}\right)\Big/$$
$$\left(5\,(a^2+b^2)^3\,d^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\right)-\frac{3\,(2\,a^4+10\,a^2\,b^2-7\,b^4)\,\text{Tan}[e+f\,x]}{5\,(a^2+b^2)^3\,d^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}}-$$
$$\left(9\,a^2\,b^3\,\text{Cot}[e+f\,x]\,\text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\,\text{ArcSin}\left[(\text{Sec}[e+f\,x]^2)^{1/4}\right],\,-1\right]\right.$$
$$\left.(\text{Sec}[e+f\,x]^2)^{1/4}\,\sqrt{-\text{Tan}[e+f\,x]^2}\right)\Big/\left(2\,(a^2+b^2)^{7/2}\,d^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\right)+$$
$$\left(9\,a^2\,b^3\,\text{Cot}[e+f\,x]\,\text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\,\text{ArcSin}\left[(\text{Sec}[e+f\,x]^2)^{1/4}\right],\,-1\right]\right.$$
$$\left.(\text{Sec}[e+f\,x]^2)^{1/4}\,\sqrt{-\text{Tan}[e+f\,x]^2}\right)\Big/\left(2\,(a^2+b^2)^{7/2}\,d^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\right)+$$
$$\frac{3\,b\,(2\,a^4+10\,a^2\,b^2-7\,b^4)\,\text{Sec}[e+f\,x]^2}{5\,(a^2+b^2)^3\,d^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\,(a+b\,\text{Tan}[e+f\,x])}+\frac{2\,\text{Cos}[e+f\,x]^2\,(b+a\,\text{Tan}[e+f\,x])}{5\,(a^2+b^2)\,d^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\,(a+b\,\text{Tan}[e+f\,x])}-$$
$$\frac{2\,(b\,(2\,a^2-7\,b^2)-3\,a\,(a^2+4\,b^2)\,\text{Tan}[e+f\,x])}{5\,(a^2+b^2)^2\,d^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\,(a+b\,\text{Tan}[e+f\,x])}$$

Result (type 4, 34 806 leaves): Display of huge result suppressed!

Problem 617: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{(d\,\text{Sec}[e+f\,x])^{7/2}}{(a+b\,\text{Tan}[e+f\,x])^3}\,dx$$

Optimal (type 4, 583 leaves, 18 steps):

$$\frac{3\left(a^2+2b^2\right)d^2\,\text{ArcTan}\left[\frac{\sqrt{b}\left(\text{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\left(d\,\text{Sec}[e+f x]\right)^{3/2}}{8\,b^{5/2}\left(a^2+b^2\right)^{5/4}f\left(\text{Sec}[e+f x]^2\right)^{3/4}}-$$

$$\frac{3\left(a^2+2b^2\right)d^2\,\text{ArcTanh}\left[\frac{\sqrt{b}\left(\text{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\left(d\,\text{Sec}[e+f x]\right)^{3/2}}{8\,b^{5/2}\left(a^2+b^2\right)^{5/4}f\left(\text{Sec}[e+f x]^2\right)^{3/4}}+$$

$$\frac{3\,a\,d^2\,\text{EllipticE}\left[\frac{1}{2}\text{ArcTan}[\text{Tan}[e+f x]],2\right]\left(d\,\text{Sec}[e+f x]\right)^{3/2}}{4\,b^2\left(a^2+b^2\right)f\left(\text{Sec}[e+f x]^2\right)^{3/4}}-$$

$$\frac{3\,a\,d^2\,\text{Cos}[e+f x]\left(d\,\text{Sec}[e+f x]\right)^{3/2}\text{Sin}[e+f x]}{4\,b^2\left(a^2+b^2\right)f}-$$

$$\left(3\,a\left(a^2+2b^2\right)d^2\,\text{Cot}[e+f x]\,\text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+f x]^2\right)^{1/4}\right],-1\right]\right.$$
$$\left.\left(d\,\text{Sec}[e+f x]\right)^{3/2}\sqrt{-\text{Tan}[e+f x]^2}\right)\Big/\left(8\,b^3\left(a^2+b^2\right)^{3/2}f\left(\text{Sec}[e+f x]^2\right)^{3/4}\right)+$$

$$\left(3\,a\left(a^2+2b^2\right)d^2\,\text{Cot}[e+f x]\,\text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+f x]^2\right)^{1/4}\right],-1\right]\right.$$
$$\left.\left(d\,\text{Sec}[e+f x]\right)^{3/2}\sqrt{-\text{Tan}[e+f x]^2}\right)\Big/\left(8\,b^3\left(a^2+b^2\right)^{3/2}f\left(\text{Sec}[e+f x]^2\right)^{3/4}\right)-$$

$$\frac{d^2\left(d\,\text{Sec}[e+f x]\right)^{3/2}}{2\,b\,f\left(a+b\,\text{Tan}[e+f x]\right)^2}+\frac{3\,a\,d^2\left(d\,\text{Sec}[e+f x]\right)^{3/2}}{4\,b\left(a^2+b^2\right)f\left(a+b\,\text{Tan}[e+f x]\right)}$$

Result (type 4, 31 478 leaves): Display of huge result suppressed!

Problem 618: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\frac{\left(d\,\text{Sec}[e+f x]\right)^{5/2}}{\left(a+b\,\text{Tan}[e+f x]\right)^3}\,dx$$

Optimal (type 4, 532 leaves, 18 steps):

$$\frac{\left(a^2-2 b^2\right) d^2 \operatorname{ArcTan}\left[\frac{\sqrt{b}\, \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] \sqrt{d \operatorname{Sec}[e+f x]}}{8 b^{3/2} \left(a^2+b^2\right)^{7/4} f \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}+$$

$$\frac{\left(a^2-2 b^2\right) d^2 \operatorname{ArcTanh}\left[\frac{\sqrt{b}\, \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] \sqrt{d \operatorname{Sec}[e+f x]}}{8 b^{3/2} \left(a^2+b^2\right)^{7/4} f \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}+$$

$$\frac{a d^2 \operatorname{EllipticF}\left[\frac{1}{2} \operatorname{ArcTan}[\operatorname{Tan}[e+f x]], 2\right] \sqrt{d \operatorname{Sec}[e+f x]}}{4 b^2 \left(a^2+b^2\right) f \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}}-$$

$$\left(a \left(a^2-2 b^2\right) d^2 \operatorname{Cot}[e+f x] \operatorname{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}}, \operatorname{ArcSin}\left[\left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right], -1\right] \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{-\operatorname{Tan}[e+f x]^2}\right) \Big/ \left(8 b^2 \left(a^2+b^2\right)^2 f \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right)-$$

$$\left(a \left(a^2-2 b^2\right) d^2 \operatorname{Cot}[e+f x] \operatorname{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}}, \operatorname{ArcSin}\left[\left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right], -1\right] \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{-\operatorname{Tan}[e+f x]^2}\right) \Big/ \left(8 b^2 \left(a^2+b^2\right)^2 f \left(\operatorname{Sec}[e+f x]^2\right)^{1/4}\right)-$$

$$\frac{d^2 \sqrt{d \operatorname{Sec}[e+f x]}}{2 b f (a+b \operatorname{Tan}[e+f x])^2}+\frac{a d^2 \sqrt{d \operatorname{Sec}[e+f x]}}{4 b \left(a^2+b^2\right) f (a+b \operatorname{Tan}[e+f x])}$$

Result (type 4, 21475 leaves): Display of huge result suppressed!

Problem 619: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{(d \operatorname{Sec}[e+f x])^{3/2}}{(a+b \operatorname{Tan}[e+f x])^3}\, dx$$

Optimal (type 4, 566 leaves, 18 steps):

$$\frac{\left(3 a^2-2 b^2\right) \text{ArcTan}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] (d\,\text{Sec}[e+f x])^{3/2}}{8 \sqrt{b}\,\left(a^2+b^2\right)^{9/4} f \left(\text{Sec}[e+f x]^2\right)^{3/4}}-$$

$$\frac{\left(3 a^2-2 b^2\right) \text{ArcTanh}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] (d\,\text{Sec}[e+f x])^{3/2}}{8 \sqrt{b}\,\left(a^2+b^2\right)^{9/4} f \left(\text{Sec}[e+f x]^2\right)^{3/4}}-$$

$$\frac{5 a\,\text{EllipticE}\left[\frac{1}{2} \text{ArcTan}[\text{Tan}[e+f x]],2\right] (d\,\text{Sec}[e+f x])^{3/2}}{4 \left(a^2+b^2\right)^2 f \left(\text{Sec}[e+f x]^2\right)^{3/4}}+$$

$$\frac{5 a\,\text{Cos}[e+f x] (d\,\text{Sec}[e+f x])^{3/2} \text{Sin}[e+f x]}{4 \left(a^2+b^2\right)^2 f}-$$

$$\left(a \left(3 a^2-2 b^2\right) \text{Cot}[e+f x]\,\text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+f x]^2\right)^{1/4}\right],-1\right]\right.$$

$$\left.(d\,\text{Sec}[e+f x])^{3/2} \sqrt{-\text{Tan}[e+f x]^2}\right) \Big/ \left(8 b \left(a^2+b^2\right)^{5/2} f \left(\text{Sec}[e+f x]^2\right)^{3/4}\right)+$$

$$\left(a \left(3 a^2-2 b^2\right) \text{Cot}[e+f x]\,\text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+f x]^2\right)^{1/4}\right],-1\right]\right.$$

$$\left.(d\,\text{Sec}[e+f x])^{3/2} \sqrt{-\text{Tan}[e+f x]^2}\right) \Big/ \left(8 b \left(a^2+b^2\right)^{5/2} f \left(\text{Sec}[e+f x]^2\right)^{3/4}\right)-$$

$$\frac{b\,(d\,\text{Sec}[e+f x])^{3/2}}{2 \left(a^2+b^2\right) f\,(a+b\,\text{Tan}[e+f x])^2}-\frac{5 a b\,(d\,\text{Sec}[e+f x])^{3/2}}{4 \left(a^2+b^2\right)^2 f\,(a+b\,\text{Tan}[e+f x])}$$

Result (type 4, 31 542 leaves) : Display of huge result suppressed!

Problem 620: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{\sqrt{d\,\text{Sec}[e+f x]}}{(a+b\,\text{Tan}[e+f x])^3}\,dx$$

Optimal (type 4, 515 leaves, 18 steps) :

$$-\frac{3\sqrt{b}\left(5a^2-2b^2\right)\text{ArcTan}\left[\frac{\sqrt{b}\left(\text{Sec}[e+fx]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\sqrt{d\,\text{Sec}[e+fx]}}{8\left(a^2+b^2\right)^{11/4}f\left(\text{Sec}[e+fx]^2\right)^{1/4}}-\frac{3\sqrt{b}\left(5a^2-2b^2\right)\text{ArcTanh}\left[\frac{\sqrt{b}\left(\text{Sec}[e+fx]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\sqrt{d\,\text{Sec}[e+fx]}}{8\left(a^2+b^2\right)^{11/4}f\left(\text{Sec}[e+fx]^2\right)^{1/4}}-$$

$$\frac{7a\,\text{EllipticF}\left[\frac{1}{2}\text{ArcTan}[\text{Tan}[e+fx]],2\right]\sqrt{d\,\text{Sec}[e+fx]}}{4\left(a^2+b^2\right)^2f\left(\text{Sec}[e+fx]^2\right)^{1/4}}+$$

$$\left(3a\left(5a^2-2b^2\right)\text{Cot}[e+fx]\,\text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+fx]^2\right)^{1/4}\right],-1\right]\sqrt{d\,\text{Sec}[e+fx]}\sqrt{-\text{Tan}[e+fx]^2}\right)\Big/\left(8\left(a^2+b^2\right)^3f\left(\text{Sec}[e+fx]^2\right)^{1/4}\right)+$$

$$\left(3a\left(5a^2-2b^2\right)\text{Cot}[e+fx]\,\text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\text{ArcSin}\left[\left(\text{Sec}[e+fx]^2\right)^{1/4}\right],-1\right]\sqrt{d\,\text{Sec}[e+fx]}\sqrt{-\text{Tan}[e+fx]^2}\right)\Big/\left(8\left(a^2+b^2\right)^3f\left(\text{Sec}[e+fx]^2\right)^{1/4}\right)-$$

$$\frac{b\sqrt{d\,\text{Sec}[e+fx]}}{2\left(a^2+b^2\right)f\left(a+b\,\text{Tan}[e+fx]\right)^2}-\frac{7ab\sqrt{d\,\text{Sec}[e+fx]}}{4\left(a^2+b^2\right)^2f\left(a+b\,\text{Tan}[e+fx]\right)}$$

Result (type 4, 41 235 leaves) : Display of huge result suppressed!

Problem 621: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\frac{1}{\sqrt{d\,\text{Sec}[e+fx]}\left(a+b\,\text{Tan}[e+fx]\right)^3}\,dx$$

Optimal (type 4, 664 leaves, 19 steps) :

$$\frac{5\,b^{3/2}\,\left(7\,a^2-2\,b^2\right)\,\text{ArcTan}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{8\,\left(a^2+b^2\right)^{13/4}\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}}-$$

$$\frac{5\,b^{3/2}\,\left(7\,a^2-2\,b^2\right)\,\text{ArcTanh}\left[\frac{\sqrt{b}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}}{8\,\left(a^2+b^2\right)^{13/4}\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}}+$$

$$\left(a\,\left(8\,a^2-37\,b^2\right)\,\text{EllipticE}\left[\frac{1}{2}\,\text{ArcTan}[\text{Tan}[e+f\,x]],\,2\right]\,\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right)\Big/$$

$$\left(4\,\left(a^2+b^2\right)^3\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\right)-\frac{a\,\left(8\,a^2-37\,b^2\right)\,\text{Tan}[e+f\,x]}{4\,\left(a^2+b^2\right)^3\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}}-$$

$$\left(5\,a\,b\,\left(7\,a^2-2\,b^2\right)\,\text{Cot}[e+f\,x]\,\text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\,\text{ArcSin}\left[\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right],\,-1\right]\right.$$

$$\left.\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\,\sqrt{-\text{Tan}[e+f\,x]^2}\right)\Big/\left(8\,\left(a^2+b^2\right)^{7/2}\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\right)+$$

$$\left(5\,a\,b\,\left(7\,a^2-2\,b^2\right)\,\text{Cot}[e+f\,x]\,\text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\,\text{ArcSin}\left[\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\right],\,-1\right]\right.$$

$$\left.\left(\text{Sec}[e+f\,x]^2\right)^{1/4}\,\sqrt{-\text{Tan}[e+f\,x]^2}\right)\Big/\left(8\,\left(a^2+b^2\right)^{7/2}\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\right)+$$

$$\frac{b\,\left(4\,a^2-5\,b^2\right)\,\text{Sec}[e+f\,x]^2}{2\,\left(a^2+b^2\right)^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\left(a+b\,\text{Tan}[e+f\,x]\right)^2}+$$

$$\frac{2\,\left(b+a\,\text{Tan}[e+f\,x]\right)}{\left(a^2+b^2\right)\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\left(a+b\,\text{Tan}[e+f\,x]\right)^2}+$$

$$\frac{a\,b\,\left(8\,a^2-37\,b^2\right)\,\text{Sec}[e+f\,x]^2}{4\,\left(a^2+b^2\right)^3\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\left(a+b\,\text{Tan}[e+f\,x]\right)}$$

Result (type 4, 32 867 leaves) : Display of huge result suppressed!

Problem 622: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{1}{\left(d\,\text{Sec}[e+f\,x]\right)^{3/2}\,\left(a+b\,\text{Tan}[e+f\,x]\right)^3}\,dx$$

Optimal (type 4, 620 leaves, 19 steps) :

$$-\frac{7\, b^{5/2} \left(9 a^2-2 b^2\right) \text{ArcTan}\left[\frac{\sqrt{b} \left(\text{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] \left(\text{Sec}[e+f x]^2\right)^{3/4}}{8 \left(a^2+b^2\right)^{15/4} f \left(d\, \text{Sec}[e+f x]\right)^{3/2}}-$$

$$\frac{7\, b^{5/2} \left(9 a^2-2 b^2\right) \text{ArcTanh}\left[\frac{\sqrt{b} \left(\text{Sec}[e+f x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right] \left(\text{Sec}[e+f x]^2\right)^{3/4}}{8 \left(a^2+b^2\right)^{15/4} f \left(d\, \text{Sec}[e+f x]\right)^{3/2}}+$$

$$\left(a \left(8 a^2-69 b^2\right) \text{EllipticF}\left[\frac{1}{2} \text{ArcTan}[\text{Tan}[e+f x]],2\right] \left(\text{Sec}[e+f x]^2\right)^{3/4}\right) \Big/ \left(12 \left(a^2+b^2\right)^3 f \left(d\, \text{Sec}[e+f x]\right)^{3/2}\right)+$$

$$\left(7\, a\, b^2 \left(9 a^2-2 b^2\right) \text{Cot}[e+f x]\, \text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}}, \text{ArcSin}\left[\left(\text{Sec}[e+f x]^2\right)^{1/4}\right],-1\right] \left(\text{Sec}[e+f x]^2\right)^{3/4} \sqrt{-\text{Tan}[e+f x]^2}\right) \Big/ \left(8 \left(a^2+b^2\right)^4 f \left(d\, \text{Sec}[e+f x]\right)^{3/2}\right)+$$

$$\left(7\, a\, b^2 \left(9 a^2-2 b^2\right) \text{Cot}[e+f x]\, \text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}}, \text{ArcSin}\left[\left(\text{Sec}[e+f x]^2\right)^{1/4}\right],-1\right] \left(\text{Sec}[e+f x]^2\right)^{3/4} \sqrt{-\text{Tan}[e+f x]^2}\right) \Big/ \left(8 \left(a^2+b^2\right)^4 f \left(d\, \text{Sec}[e+f x]\right)^{3/2}\right)+$$

$$\frac{b \left(4 a^2-7 b^2\right) \text{Sec}[e+f x]^2}{6 \left(a^2+b^2\right)^2 f \left(d\, \text{Sec}[e+f x]\right)^{3/2} \left(a+b\, \text{Tan}[e+f x]\right)^2}+\frac{2 \left(b+a\, \text{Tan}[e+f x]\right)}{3 \left(a^2+b^2\right) f \left(d\, \text{Sec}[e+f x]\right)^{3/2} \left(a+b\, \text{Tan}[e+f x]\right)^2}+\frac{a\, b \left(8 a^2-69 b^2\right) \text{Sec}[e+f x]^2}{12 \left(a^2+b^2\right)^3 f \left(d\, \text{Sec}[e+f x]\right)^{3/2} \left(a+b\, \text{Tan}[e+f x]\right)}$$

Result (type 4, 42 324 leaves) : Display of huge result suppressed!

Problem 623: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{1}{\left(d\, \text{Sec}[e+f x]\right)^{5/2} \left(a+b\, \text{Tan}[e+f x]\right)^3}\, dx$$

Optimal (type 4, 814 leaves, 20 steps) :

$$\frac{9\, b^{7/2}\, \left(11\, a^2 - 2\, b^2\right)\, \text{ArcTan}\left[\frac{\sqrt{b}\, \left(\text{Sec}[e+f\, x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\, \left(\text{Sec}[e+f\, x]^2\right)^{1/4}}{8\, \left(a^2+b^2\right)^{17/4}\, d^2\, f\, \sqrt{d\, \text{Sec}[e+f\, x]}} -$$

$$\frac{9\, b^{7/2}\, \left(11\, a^2 - 2\, b^2\right)\, \text{ArcTanh}\left[\frac{\sqrt{b}\, \left(\text{Sec}[e+f\, x]^2\right)^{1/4}}{\left(a^2+b^2\right)^{1/4}}\right]\, \left(\text{Sec}[e+f\, x]^2\right)^{1/4}}{8\, \left(a^2+b^2\right)^{17/4}\, d^2\, f\, \sqrt{d\, \text{Sec}[e+f\, x]}} +$$

$$\left(3\, a\, \left(8\, a^4 + 64\, a^2\, b^2 - 139\, b^4\right)\, \text{EllipticE}\left[\frac{1}{2}\, \text{ArcTan}[\text{Tan}[e+f\, x]],\, 2\right]\, \left(\text{Sec}[e+f\, x]^2\right)^{1/4}\right) \Big/$$

$$\left(20\, \left(a^2+b^2\right)^4\, d^2\, f\, \sqrt{d\, \text{Sec}[e+f\, x]}\right) - \frac{3\, a\, \left(8\, a^4 + 64\, a^2\, b^2 - 139\, b^4\right)\, \text{Tan}[e+f\, x]}{20\, \left(a^2+b^2\right)^4\, d^2\, f\, \sqrt{d\, \text{Sec}[e+f\, x]}} -$$

$$\left(9\, a\, b^3\, \left(11\, a^2 - 2\, b^2\right)\, \text{Cot}[e+f\, x]\, \text{EllipticPi}\left[-\frac{b}{\sqrt{a^2+b^2}},\, \text{ArcSin}\left[\left(\text{Sec}[e+f\, x]^2\right)^{1/4}\right],\, -1\right]\right.$$

$$\left.\left(\text{Sec}[e+f\, x]^2\right)^{1/4}\, \sqrt{-\text{Tan}[e+f\, x]^2}\right) \Big/ \left(8\, \left(a^2+b^2\right)^{9/2}\, d^2\, f\, \sqrt{d\, \text{Sec}[e+f\, x]}\right) +$$

$$\left(9\, a\, b^3\, \left(11\, a^2 - 2\, b^2\right)\, \text{Cot}[e+f\, x]\, \text{EllipticPi}\left[\frac{b}{\sqrt{a^2+b^2}},\, \text{ArcSin}\left[\left(\text{Sec}[e+f\, x]^2\right)^{1/4}\right],\, -1\right]\right.$$

$$\left.\left(\text{Sec}[e+f\, x]^2\right)^{1/4}\, \sqrt{-\text{Tan}[e+f\, x]^2}\right) \Big/ \left(8\, \left(a^2+b^2\right)^{9/2}\, d^2\, f\, \sqrt{d\, \text{Sec}[e+f\, x]}\right) +$$

$$\frac{3\, b\, \left(4\, a^4 + 28\, a^2\, b^2 - 15\, b^4\right)\, \text{Sec}[e+f\, x]^2}{10\, \left(a^2+b^2\right)^3\, d^2\, f\, \sqrt{d\, \text{Sec}[e+f\, x]}\, \left(a + b\, \text{Tan}[e+f\, x]\right)^2} +$$

$$\frac{2\, \text{Cos}[e+f\, x]^2\, \left(b + a\, \text{Tan}[e+f\, x]\right)}{5\, \left(a^2+b^2\right)\, d^2\, f\, \sqrt{d\, \text{Sec}[e+f\, x]}\, \left(a + b\, \text{Tan}[e+f\, x]\right)^2} +$$

$$\frac{3\, a\, b\, \left(8\, a^4 + 64\, a^2\, b^2 - 139\, b^4\right)\, \text{Sec}[e+f\, x]^2}{20\, \left(a^2+b^2\right)^4\, d^2\, f\, \sqrt{d\, \text{Sec}[e+f\, x]}\, \left(a + b\, \text{Tan}[e+f\, x]\right)} -$$

$$\frac{2\, \left(b\, \left(4\, a^2 - 9\, b^2\right) - a\, \left(3\, a^2 + 16\, b^2\right)\, \text{Tan}[e+f\, x]\right)}{5\, \left(a^2+b^2\right)^2\, d^2\, f\, \sqrt{d\, \text{Sec}[e+f\, x]}\, \left(a + b\, \text{Tan}[e+f\, x]\right)^2}$$

Result (type 4, 34 358 leaves) : Display of huge result suppressed!

Problem 626: Mathematica result simpler than optimal antiderivative, IF it can be verified!

$$\int \frac{a + b\, \text{Tan}[e+f\, x]}{\left(d\, \text{Sec}[e+f\, x]\right)^{1/3}}\, dx$$

Optimal (type 5, 76 leaves, 3 steps) :

$$-\frac{3\, b}{f\, \left(d\, \text{Sec}[e+f\, x]\right)^{1/3}} - \frac{3\, a\, d\, \text{Hypergeometric2F1}\left[\frac{1}{2},\, \frac{2}{3},\, \frac{5}{3},\, \text{Cos}[e+f\, x]^2\right]\, \text{Sin}[e+f\, x]}{4\, f\, \left(d\, \text{Sec}[e+f\, x]\right)^{4/3}\, \sqrt{\text{Sin}[e+f\, x]^2}}$$

Result (type 4, 2147 leaves) :

$$\left(\sqrt{1-\text{Cos}[e+f x]^2}\right.$$

$$\left(\left((-1)^{1/3}+\text{Sec}[e+f x]^{2/3}+\sqrt{3}\ \text{Sec}[e+f x]^{2/3}\right)^6 \text{Sec}[e+f x]^{1/3}\left(-1+\text{Sec}[e+f x]^2\right)^2\right.$$

$$\left(-\frac{3 b}{\text{Sec}[e+f x]^{1/3}}+3 a \sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{2/3}-\left(6 a \sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]\right.\right.$$

$$\left(\left((-1)^{1/3}\left(-6\,\text{EllipticE}\left[\text{ArcCos}\left[\frac{(-1)^{1/3}+\left(1-\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}}\right],\frac{1}{4}\left(2+\sqrt{3}\right)\right]+\right.\right.\right.$$

$$\left.\left(3-\sqrt{3}\right)\text{EllipticF}\left[\text{ArcCos}\left[\frac{(-1)^{1/3}+\left(1-\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}}\right],\frac{1}{4}\left(2+\sqrt{3}\right)\right]\right)$$

$$\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\right)^2\sqrt{\frac{\left((-1)^{1/3}+\text{Sec}[e+f x]^{2/3}\right)\text{Sec}[e+f x]^{2/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\right)^2}}$$

$$\left.\sqrt{\frac{(-1)^{2/3}-(-1)^{1/3}\text{Sec}[e+f x]^{2/3}+\text{Sec}[e+f x]^{4/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\right)^2}}\right)\Big/\left(4\times 3^{3/4}\,\text{Sec}[e+f x]^{1/3}\right.$$

$$\left.\left.\left.\sqrt{-1+\text{Sec}[e+f x]^2}\right)+\frac{\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{1/3}\sqrt{-1+\text{Sec}[e+f x]^2}}{2\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\right)}\right)\right)\Big/$$

$$\left.\left.\left(\sqrt{-1+\text{Sec}[e+f x]^2}\right)\right)\left(a+b\,\text{Tan}[e+f x]\right)\right)\Big/\left(f\left(d\,\text{Sec}[e+f x]\right)^{1/3}\right.$$

$$\left(a\,\text{Sin}[e+f x]-6(-1)^{2/3} a\,\text{Sec}[e+f x]^{2/3}\text{Sin}[e+f x]-\right.$$
$$6(-1)^{2/3}\sqrt{3}\ a\,\text{Sec}[e+f x]^{2/3}\text{Sin}[e+f x]-$$
$$60(-1)^{1/3} a\,\text{Sec}[e+f x]^{4/3}\text{Sin}[e+f x]-$$
$$30(-1)^{1/3}\sqrt{3}\ a\,\text{Sec}[e+f x]^{4/3}\text{Sin}[e+f x]-$$
$$6(-1)^{2/3} b\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{5/3}\text{Sin}[e+f x]-$$
$$6(-1)^{2/3}\sqrt{3}\ b\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{5/3}\text{Sin}[e+f x]-$$
$$60(-1)^{1/3} b\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{7/3}\text{Sin}[e+f x]-$$
$$30(-1)^{1/3}\sqrt{3}\ b\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{7/3}\text{Sin}[e+f x]+$$
$$432(-1)^{2/3} a\,\text{Sec}[e+f x]^{8/3}\text{Sin}[e+f x]+$$
$$252(-1)^{2/3}\sqrt{3}\ a\,\text{Sec}[e+f x]^{8/3}\text{Sin}[e+f x]+$$
$$576(-1)^{1/3} a\,\text{Sec}[e+f x]^{10/3}\text{Sin}[e+f x]+$$
$$324(-1)^{1/3}\sqrt{3}\ a\,\text{Sec}[e+f x]^{10/3}\text{Sin}[e+f x]+$$

$432\,(-1)^{2/3}\,b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{11/3}\,\text{Sin}[e+f x]\,+$
$252\,(-1)^{2/3}\,\sqrt{3}\ b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{11/3}\,\text{Sin}[e+f x]\,+$
$576\,(-1)^{1/3}\,b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{13/3}\,\text{Sin}[e+f x]\,+$
$324\,(-1)^{1/3}\,\sqrt{3}\ b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{13/3}\,\text{Sin}[e+f x]\,-$
$846\,(-1)^{2/3}\,a\,\text{Sec}[e+f x]^{14/3}\,\text{Sin}[e+f x]-486\,(-1)^{2/3}\,\sqrt{3}\ a\,\text{Sec}[e+f x]^{14/3}\,\text{Sin}[e+f x]\,-$
$972\,(-1)^{1/3}\,a\,\text{Sec}[e+f x]^{16/3}\,\text{Sin}[e+f x]-558\,(-1)^{1/3}\,\sqrt{3}\ a\,\text{Sec}[e+f x]^{16/3}\,\text{Sin}[e+f x]\,-$
$846\,(-1)^{2/3}\,b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{17/3}\,\text{Sin}[e+f x]\,-$
$486\,(-1)^{2/3}\,\sqrt{3}\ b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{17/3}\,\text{Sin}[e+f x]\,-$
$972\,(-1)^{1/3}\,b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{19/3}\,\text{Sin}[e+f x]\,-$
$558\,(-1)^{1/3}\,\sqrt{3}\ b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{19/3}\,\text{Sin}[e+f x]\,+$
$420\,(-1)^{2/3}\,a\,\text{Sec}[e+f x]^{20/3}\,\text{Sin}[e+f x]+240\,(-1)^{2/3}\,\sqrt{3}\ a\,\text{Sec}[e+f x]^{20/3}\,\text{Sin}[e+f x]\,+$
$456\,(-1)^{1/3}\,a\,\text{Sec}[e+f x]^{22/3}\,\text{Sin}[e+f x]+264\,(-1)^{1/3}\,\sqrt{3}\ a\,\text{Sec}[e+f x]^{22/3}\,\text{Sin}[e+f x]\,+$
$420\,(-1)^{2/3}\,b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{23/3}\,\text{Sin}[e+f x]\,+$
$240\,(-1)^{2/3}\,\sqrt{3}\ b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{23/3}\,\text{Sin}[e+f x]\,+$
$456\,(-1)^{1/3}\,b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{25/3}\,\text{Sin}[e+f x]\,+$
$264\,(-1)^{1/3}\,\sqrt{3}\ b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{25/3}\,\text{Sin}[e+f x]\,+$
$b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Tan}[e+f x]-202\,a\,\text{Sec}[e+f x]\,\text{Tan}[e+f x]\,-$
$120\,\sqrt{3}\ a\,\text{Sec}[e+f x]\,\text{Tan}[e+f x]-202\,b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\,-$
$120\,\sqrt{3}\ b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+609\,a\,\text{Sec}[e+f x]^3\,\text{Tan}[e+f x]\,+$
$360\,\sqrt{3}\ a\,\text{Sec}[e+f x]^3\,\text{Tan}[e+f x]+609\,b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^4\,\text{Tan}[e+f x]\,+$
$360\,\sqrt{3}\ b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^4\,\text{Tan}[e+f x]-616\,a\,\text{Sec}[e+f x]^5\,\text{Tan}[e+f x]\,-$
$360\,\sqrt{3}\ a\,\text{Sec}[e+f x]^5\,\text{Tan}[e+f x]-616\,b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^6\,\text{Tan}[e+f x]\,-$
$360\,\sqrt{3}\ b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^6\,\text{Tan}[e+f x]+208\,a\,\text{Sec}[e+f x]^7\,\text{Tan}[e+f x]\,+$
$120\,\sqrt{3}\ a\,\text{Sec}[e+f x]^7\,\text{Tan}[e+f x]+208\,b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^8\,\text{Tan}[e+f x]\,+$
$120\,\sqrt{3}\ b\,\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^8\,\text{Tan}[e+f x]\Big)\Big)$

Problem 630: Mathematica result simpler than optimal antiderivative, IF it can be verified!

$$\int \frac{(a+b\,\text{Tan}[e+f x])^2}{(d\,\text{Sec}[e+f x])^{1/3}}\,dx$$

Optimal (type 5, 119 leaves, 4 steps):

$$-\frac{15\,a\,b}{2\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}}-\left(3\,\left(2\,a^2-3\,b^2\right)\,d\,\text{Hypergeometric2F1}\left[\frac{1}{2},\frac{2}{3},\frac{5}{3},\text{Cos}[e+f\,x]^2\right]\,\text{Sin}[e+f\,x]\right)\Big/\left(8\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{4/3}\,\sqrt{\text{Sin}[e+f\,x]^2}\right)+\frac{3\,b\,\left(a+b\,\text{Tan}[e+f\,x]\right)}{2\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}}$$

Result (type 4, 4052 leaves):

$$\frac{3\,b^2\,\text{Cos}[e+f\,x]\,\text{Sin}[e+f\,x]\,\left(a+b\,\text{Tan}[e+f\,x]\right)^2}{2\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)^2}+$$

$$\left(3\left(-4\,a\,b\,\text{Sec}[e+f\,x]+\left(2\,a^2-3\,b^2\right)\sqrt{1-\text{Cos}[e+f\,x]^2}\,\text{Sec}[e+f\,x]^2-\right.\right.$$

$$\frac{1}{6\sqrt{1-\text{Cos}[e+f\,x]^2}\,\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}\right)}\left(2\,a^2-3\,b^2\right)$$

$$\left((-1)^{1/3}\,3^{1/4}\left(-6\,\text{EllipticE}\left[\text{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}}\right],\frac{1}{4}\left(2+\sqrt{3}\right)\right]-\right.\right.$$

$$\left.\left(-3+\sqrt{3}\right)\text{EllipticF}\left[\text{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}}\right],\frac{1}{4}\left(2+\sqrt{3}\right)\right]\right)$$

$$\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}\right)^3\sqrt{\frac{\left((-1)^{1/3}+\text{Sec}[e+f\,x]^{2/3}\right)\text{Sec}[e+f\,x]^{2/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}\right)^2}}$$

$$\sqrt{\frac{(-1)^{2/3}-(-1)^{1/3}\,\text{Sec}[e+f\,x]^{2/3}+\text{Sec}[e+f\,x]^{4/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}\right)^2}}+$$

$$\left.\left.\left.6\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)$$

$$\left(2\,a^2\,\text{Cos}[e+f\,x]-3\,b^2\,\text{Cos}[e+f\,x]+4\,a\,b\,\text{Sin}[e+f\,x]\right)$$

$$\left.\left(a+b\,\text{Tan}[e+f\,x]\right)^2\right)\Big/\left(2\right.$$

$$f$$

$$\text{Sec}[e+f\,x]^{7/3}$$

$$(d\,\mathrm{Sec}[e+f\,x])^{1/3}$$
$$(a\,\mathrm{Cos}[e+f\,x]+b\,\mathrm{Sin}[e+f\,x])^2$$

$$\left(-\frac{1}{\mathrm{Sec}[e+f\,x]^{1/3}}\,4\,\left(-4\,a\,b\,\mathrm{Sec}[e+f\,x]+\left(2\,a^2-3\,b^2\right)\sqrt{1-\mathrm{Cos}[e+f\,x]^2}\,\mathrm{Sec}[e+f\,x]^2-\right.\right.$$

$$\left(1\Big/\left(6\sqrt{1-\mathrm{Cos}[e+f\,x]^2}\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)\right)\right)\left(2\,a^2-3\,b^2\right)$$

$$\left((-1)^{1/3}\,3^{1/4}\left(-6\,\mathrm{EllipticE}\left[\mathrm{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}\right],\right.\right.\right.$$

$$\left.\frac{1}{4}\left(2+\sqrt{3}\right)\right]-\left(-3+\sqrt{3}\right)\mathrm{EllipticF}\left[\mathrm{ArcCos}\left[\right.\right.$$

$$\left.\left.\left.\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}\right],\frac{1}{4}\left(2+\sqrt{3}\right)\right]\right)\left((-1)^{1/3}+\right.$$

$$\left.\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^3\sqrt{\frac{\left((-1)^{1/3}+\mathrm{Sec}[e+f\,x]^{2/3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}}$$

$$\sqrt{\left(\left((-1)^{2/3}-(-1)^{1/3}\,\mathrm{Sec}[e+f\,x]^{2/3}+\mathrm{Sec}[e+f\,x]^{4/3}\right)\Big/\right.}$$
$$\left.\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2\right)+6\left(1+\sqrt{3}\right)$$

$$\left.\left.\left.\mathrm{Sec}[e+f\,x]^{2/3}\left(-1+\mathrm{Sec}[e+f\,x]^2\right)\right)\right)\mathrm{Sin}[e+f\,x]+\frac{1}{\mathrm{Sec}[e+f\,x]^{4/3}}$$

$$3\left(\left(1\Big/\left(6\left(1-\mathrm{Cos}[e+f\,x]^2\right)^{3/2}\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)\right)\right)\left(2\,a^2-3\,b^2\right)\mathrm{Cos}[\right.$$

$$e+f\,x]\left((-1)^{1/3}\,3^{1/4}\left(-6\,\mathrm{EllipticE}\left[\mathrm{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}\right],\right.\right.\right.$$

$$\frac{1}{4}\left(2+\sqrt{3}\right)\right]-\left(-3+\sqrt{3}\right)\mathrm{EllipticF}\left[\right.$$

$$\text{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}}\right],\frac{1}{4}\left(2+\sqrt{3}\right)\Big]\Bigg)\left((-1)^{1/3}+\right.$$

$$\left.\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\right)^3\sqrt{\frac{\left((-1)^{1/3}+\text{Sec}[e+f x]^{2/3}\right)\text{Sec}[e+f x]^{2/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\right)^2}}$$

$$\sqrt{\frac{(-1)^{2/3}-(-1)^{1/3}\text{Sec}[e+f x]^{2/3}+\text{Sec}[e+f x]^{4/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\right)^2}}+$$

$$\left.6\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\text{Sin}[e+f x]+$$

$$\left(1\Big/\left(9\sqrt{1-\text{Cos}[e+f x]^2}\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\right)^2\right)\right)$$

$$\left(1+\sqrt{3}\right)\left(2a^2-3b^2\right)\text{Sec}[e+f x]^{5/3}$$

$$\Bigg((-1)^{1/3}3^{1/4}\Bigg(-6\,\text{EllipticE}\Big[\text{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}}\right],$$

$$\frac{1}{4}\left(2+\sqrt{3}\right)\Big]-\left(-3+\sqrt{3}\right)\text{EllipticF}\Big[$$

$$\text{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}}\right],\frac{1}{4}\left(2+\sqrt{3}\right)\Big]\Bigg)\left((-1)^{1/3}+\right.$$

$$\left.\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\right)^3\sqrt{\frac{\left((-1)^{1/3}+\text{Sec}[e+f x]^{2/3}\right)\text{Sec}[e+f x]^{2/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\right)^2}}$$

$$\sqrt{\frac{(-1)^{2/3}-(-1)^{1/3}\text{Sec}[e+f x]^{2/3}+\text{Sec}[e+f x]^{4/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\right)^2}}+$$

$$\left.6\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\text{Sin}[e+f x]-$$

$$\frac{1}{6\sqrt{1-\text{Cos}[e+f x]^2}\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f x]^{2/3}\right)}$$

$$\left(2\,a^2-3\,b^2\right)\left(12\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{11/3}\,\mathrm{Sin}[e+f\,x]+2\,(-1)^{1/3}\,3^{1/4}\left(1+\sqrt{3}\right)\right.$$

$$\left(-6\,\mathrm{EllipticE}\left[\mathrm{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}\right],\,\frac{1}{4}\left(2+\sqrt{3}\right)\right]-\right.$$

$$\left(-3+\sqrt{3}\right)\mathrm{EllipticF}\left[\mathrm{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}\right],$$

$$\left.\frac{1}{4}\left(2+\sqrt{3}\right)\right]\right)\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2$$

$$\sqrt{\frac{\left((-1)^{1/3}+\mathrm{Sec}[e+f\,x]^{2/3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}}\;\mathrm{Sec}[e+f\,x]^{5/3}$$

$$\sqrt{\frac{(-1)^{2/3}-(-1)^{1/3}\,\mathrm{Sec}[e+f\,x]^{2/3}+\mathrm{Sec}[e+f\,x]^{4/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}}\;\mathrm{Sin}[e+f\,x]+$$

$$4\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{5/3}\left(-1+\mathrm{Sec}[e+f\,x]^2\right)\mathrm{Sin}[e+f\,x]+$$

$$\frac{1}{2\sqrt{\frac{\left((-1)^{1/3}+\mathrm{Sec}[e+f\,x]^{2/3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}}}\,(-1)^{1/3}\,3^{1/4}\left(-6\,\mathrm{EllipticE}\left[\right.\right.$$

$$\mathrm{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}\right],\,\frac{1}{4}\left(2+\sqrt{3}\right)\right]-\left(-3+\sqrt{3}\right)$$

$$\left.\mathrm{EllipticF}\left[\mathrm{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}\right],\,\frac{1}{4}\left(2+\sqrt{3}\right)\right]\right)$$

$$\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^3\sqrt{\left(\left((-1)^{2/3}-(-1)^{1/3}\,\mathrm{Sec}[e+f\,x]^{2/3}+\right.\right.}$$

$$\left.\left.\mathrm{Sec}[e+f\,x]^{4/3}\right)\Big/\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2\right)$$

$$\left(\left(2\left((-1)^{1/3}+\mathrm{Sec}[e+f\,x]^{2/3}\right)\mathrm{Sec}[e+f\,x]^{5/3}\,\mathrm{Sin}[e+f\,x]\right)\Big/\left(3\left((-1)^{1/3}+\right.\right.\right.$$

$$\left.\left.\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2\right)-\left(4\left(1+\sqrt{3}\right)\left((-1)^{1/3}+\mathrm{Sec}[e+f\,x]^{2/3}\right)\right.$$

$$\left.\mathrm{Sec}[e+f\,x]^{7/3}\,\mathrm{Sin}[e+f\,x]\right)\Big/\left(3\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^3\right)+$$

$$\left.\frac{2\,\mathrm{Sec}[e+f\,x]^{7/3}\,\mathrm{Sin}[e+f\,x]}{3\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}\right)+(-1)^{1/3}\,3^{1/4}\left((-1)^{1/3}+\right.$$

$$\left.\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^3\sqrt{\frac{\left((-1)^{1/3}+\mathrm{Sec}[e+f\,x]^{2/3}\right)\mathrm{Sec}[e+f\,x]^{2/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}}$$

$$\sqrt{\frac{(-1)^{2/3}-(-1)^{1/3}\,\mathrm{Sec}[e+f\,x]^{2/3}+\mathrm{Sec}[e+f\,x]^{4/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}}\left(\left(\left(-3+\sqrt{3}\right)\right.\right.$$

$$\left(-\left(\left(2\left(1+\sqrt{3}\right)\left((-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)\mathrm{Sec}[e+f\,x]^{5/3}\right.\right.\right.$$

$$\left.\left.\mathrm{Sin}[e+f\,x]\right)\Big/\left(3\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2\right)\right)-$$

$$\left.\left.\frac{2\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{5/3}\,\mathrm{Sin}[e+f\,x]}{3\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)}\right)\right)\Big/$$

$$\left(\sqrt{\left(1-\frac{1}{4}\left(2+\sqrt{3}\right)\left(1-\frac{\left((-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}\right)\right)}\right.$$

$$\left.\sqrt{1-\frac{\left((-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}}\right)+$$

$$\left(6\sqrt{\left(1-\frac{1}{4}\left(2+\sqrt{3}\right)\left(1-\frac{\left((-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}\right)\right)}\right.$$

$$\left(-\left(\left(2\left(1+\sqrt{3}\right)\left((-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)\mathrm{Sec}[e+f\,x]^{5/3}\right.\right.\right.$$

$$\left.\left.\mathrm{Sin}[e+f\,x]\right)\Big/\left(3\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2\right)\right)-$$

$$\left.\left.\frac{2\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{5/3}\,\mathrm{Sin}[e+f\,x]}{3\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)}\right)\right)\Big/$$

$$\left(\sqrt{1-\frac{\left((-1)^{1/3}-\left(-1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\mathrm{Sec}[e+f\,x]^{2/3}\right)^2}}\right)\right)+$$

$$\frac{1}{2\sqrt{\frac{(-1)^{2/3}-(-1)^{1/3}\,\text{Sec}[e+f\,x]^{2/3}+\text{Sec}[e+f\,x]^{4/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}\right)^2}}}(-1)^{1/3}\,3^{1/4}$$

$$\left(-6\,\text{EllipticE}\left[\text{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}}\right],\frac{1}{4}\left(2+\sqrt{3}\right)\right]-\right.$$

$$\left(-3+\sqrt{3}\right)\text{EllipticF}\left[\text{ArcCos}\left[\frac{(-1)^{1/3}-\left(-1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}}{(-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}}\right],$$

$$\left.\frac{1}{4}\left(2+\sqrt{3}\right)\right]\right)\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}\right)^3$$

$$\sqrt{\frac{\left((-1)^{1/3}+\text{Sec}[e+f\,x]^{2/3}\right)\text{Sec}[e+f\,x]^{2/3}}{\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}\right)^2}}\left(-\left(\left(4\left(1+\sqrt{3}\right)\right.\right.\right.$$

$$\text{Sec}[e+f\,x]^{5/3}\left((-1)^{2/3}-(-1)^{1/3}\,\text{Sec}[e+f\,x]^{2/3}+\text{Sec}[e+f\,x]^{4/3}\right)$$

$$\left.\text{Sin}[e+f\,x]\right)\Big/\left(3\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}\right)^3\right)\Big)+$$

$$\left(-\frac{2}{3}(-1)^{1/3}\,\text{Sec}[e+f\,x]^{5/3}\,\text{Sin}[e+f\,x]+\frac{4}{3}\,\text{Sec}[e+f\,x]^{7/3}\,\text{Sin}[e+f\,x]\right)\Big/$$

$$\left.\left(\left((-1)^{1/3}+\left(1+\sqrt{3}\right)\text{Sec}[e+f\,x]^{2/3}\right)^2\right)\right)+$$

$$\frac{\left(2\,a^2-3\,b^2\right)\text{Tan}[e+f\,x]}{\sqrt{1-\text{Cos}[e+f\,x]^2}}-4\,a\,b\,\text{Sec}[e+f\,x]\,\text{Tan}[e+f\,x]+2\left(2\,a^2-3\,b^2\right)$$

$$\left.\left.\left.\sqrt{1-\text{Cos}[e+f\,x]^2}\,\text{Sec}[e+f\,x]^2\,\text{Tan}[e+f\,x]\right)\right)\right)$$

Problem 632: Result unnecessarily involves imaginary or complex numbers.

$$\int\frac{(d\,\text{Sec}[e+f\,x])^{5/3}}{a+b\,\text{Tan}[e+f\,x]}\,dx$$

Optimal (type 6, 552 leaves, 16 steps):

$$-\frac{\sqrt{3}\,\text{ArcTan}\left[\frac{1}{\sqrt{3}}-\frac{2\,b^{1/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{\sqrt{3}\,\left(a^2+b^2\right)^{1/6}}\right]\,\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}}{2\,b^{2/3}\,\left(a^2+b^2\right)^{1/6}\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{5/6}}+$$

$$\frac{\sqrt{3}\,\text{ArcTan}\left[\frac{1}{\sqrt{3}}+\frac{2\,b^{1/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{\sqrt{3}\,\left(a^2+b^2\right)^{1/6}}\right]\,\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}}{2\,b^{2/3}\,\left(a^2+b^2\right)^{1/6}\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{5/6}}-$$

$$\frac{\text{ArcTanh}\left[\frac{b^{1/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{\left(a^2+b^2\right)^{1/6}}\right]\,\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}}{b^{2/3}\,\left(a^2+b^2\right)^{1/6}\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{5/6}}+$$

$$\left(\text{Log}\left[\left(a^2+b^2\right)^{1/3}-b^{1/3}\,\left(a^2+b^2\right)^{1/6}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}+b^{2/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/3}\right]\,\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}\right)\Big/$$
$$\left(4\,b^{2/3}\,\left(a^2+b^2\right)^{1/6}\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{5/6}\right)-$$
$$\left(\text{Log}\left[\left(a^2+b^2\right)^{1/3}+b^{1/3}\,\left(a^2+b^2\right)^{1/6}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}+b^{2/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/3}\right]\,\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}\right)\Big/$$
$$\left(4\,b^{2/3}\,\left(a^2+b^2\right)^{1/6}\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{5/6}\right)+$$
$$\left(\text{AppellF1}\left[\frac{1}{2},1,\frac{1}{6},\frac{3}{2},\frac{b^2\,\text{Tan}[e+f\,x]^2}{a^2},-\text{Tan}[e+f\,x]^2\right]\,\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}\,\text{Tan}[e+f\,x]\right)\Big/$$
$$\left(a\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{5/6}\right)$$

Result (type 6, 276 leaves):

$$-\left(\left(24\,d^2\,\text{AppellF1}\left[\frac{1}{3},\frac{1}{6},\frac{1}{6},\frac{4}{3},\frac{a-\mathrm{i}\,b}{a+b\,\text{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\text{Tan}[e+f\,x]}\right]\,\left(a+b\,\text{Tan}[e+f\,x]\right)\right)\Big/\left(b\,f\right.\right.$$
$$\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}\,\left(\left(a+\mathrm{i}\,b\right)\,\text{AppellF1}\left[\frac{4}{3},\frac{1}{6},\frac{7}{6},\frac{7}{3},\frac{a-\mathrm{i}\,b}{a+b\,\text{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\text{Tan}[e+f\,x]}\right]+\right.$$
$$\left(a-\mathrm{i}\,b\right)\,\text{AppellF1}\left[\frac{4}{3},\frac{7}{6},\frac{1}{6},\frac{7}{3},\frac{a-\mathrm{i}\,b}{a+b\,\text{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\text{Tan}[e+f\,x]}\right]+$$
$$\left.\left.\left.8\,\text{AppellF1}\left[\frac{1}{3},\frac{1}{6},\frac{1}{6},\frac{4}{3},\frac{a-\mathrm{i}\,b}{a+b\,\text{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\text{Tan}[e+f\,x]}\right]\,\left(a+b\,\text{Tan}[e+f\,x]\right)\right)\right)\right)$$

Problem 633: Result unnecessarily involves imaginary or complex numbers.

$$\int\frac{\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}}{a+b\,\text{Tan}[e+f\,x]}\,dx$$

Optimal (type 6, 552 leaves, 16 steps):

$$\frac{\sqrt{3}\, b^{2/3} \text{ArcTan}\left[\frac{1}{\sqrt{3}}-\frac{2 b^{1/3} \left(\text{Sec}[e+f x]^2\right)^{1/6}}{\sqrt{3} \left(a^2+b^2\right)^{1/6}}\right] (d \text{Sec}[e+f x])^{1/3}}{2 \left(a^2+b^2\right)^{5/6} f \left(\text{Sec}[e+f x]^2\right)^{1/6}}-$$

$$\frac{\sqrt{3}\, b^{2/3} \text{ArcTan}\left[\frac{1}{\sqrt{3}}+\frac{2 b^{1/3} \left(\text{Sec}[e+f x]^2\right)^{1/6}}{\sqrt{3} \left(a^2+b^2\right)^{1/6}}\right] (d \text{Sec}[e+f x])^{1/3}}{2 \left(a^2+b^2\right)^{5/6} f \left(\text{Sec}[e+f x]^2\right)^{1/6}}-$$

$$\frac{b^{2/3} \text{ArcTanh}\left[\frac{b^{1/3} \left(\text{Sec}[e+f x]^2\right)^{1/6}}{\left(a^2+b^2\right)^{1/6}}\right] (d \text{Sec}[e+f x])^{1/3}}{\left(a^2+b^2\right)^{5/6} f \left(\text{Sec}[e+f x]^2\right)^{1/6}}+$$

$$\left(b^{2/3} \text{Log}\left[\left(a^2+b^2\right)^{1/3}-b^{1/3} \left(a^2+b^2\right)^{1/6} \left(\text{Sec}[e+f x]^2\right)^{1/6}+b^{2/3} \left(\text{Sec}[e+f x]^2\right)^{1/3}\right] (d \text{Sec}[e+f x])^{1/3}\right) \Big/ \left(4 \left(a^2+b^2\right)^{5/6} f \left(\text{Sec}[e+f x]^2\right)^{1/6}\right)-$$

$$\left(b^{2/3} \text{Log}\left[\left(a^2+b^2\right)^{1/3}+b^{1/3} \left(a^2+b^2\right)^{1/6} \left(\text{Sec}[e+f x]^2\right)^{1/6}+b^{2/3} \left(\text{Sec}[e+f x]^2\right)^{1/3}\right] (d \text{Sec}[e+f x])^{1/3}\right) \Big/ \left(4 \left(a^2+b^2\right)^{5/6} f \left(\text{Sec}[e+f x]^2\right)^{1/6}\right)+$$

$$\left(\text{AppellF1}\left[\frac{1}{2},1,\frac{5}{6},\frac{3}{2},\frac{b^2 \text{Tan}[e+f x]^2}{a^2},-\text{Tan}[e+f x]^2\right] (d \text{Sec}[e+f x])^{1/3} \text{Tan}[e+f x]\right) \Big/ \left(a f \left(\text{Sec}[e+f x]^2\right)^{1/6}\right)$$

Result (type 6, 280 leaves):

$$-\left(\left(48 d^2 \text{AppellF1}\left[\frac{5}{3},\frac{5}{6},\frac{5}{6},\frac{8}{3},\frac{a-i b}{a+b \text{Tan}[e+f x]},\frac{a+i b}{a+b \text{Tan}[e+f x]}\right] (a+b \text{Tan}[e+f x])\right) \Big/ \left(5 b f (d \text{Sec}[e+f x])^{5/3} \left(5 (a+i b) \text{AppellF1}\left[\frac{8}{3},\frac{5}{6},\frac{11}{6},\frac{11}{3},\frac{a-i b}{a+b \text{Tan}[e+f x]},\frac{a+i b}{a+b \text{Tan}[e+f x]}\right]+5 (a-i b) \text{AppellF1}\left[\frac{8}{3},\frac{11}{6},\frac{5}{6},\frac{11}{3},\frac{a-i b}{a+b \text{Tan}[e+f x]},\frac{a+i b}{a+b \text{Tan}[e+f x]}\right]+16 \text{AppellF1}\left[\frac{5}{3},\frac{5}{6},\frac{5}{6},\frac{8}{3},\frac{a-i b}{a+b \text{Tan}[e+f x]},\frac{a+i b}{a+b \text{Tan}[e+f x]}\right] (a+b \text{Tan}[e+f x])\right)\right)\right)$$

Problem 634: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{1}{(d \text{Sec}[e+f x])^{1/3} (a+b \text{Tan}[e+f x])} \, dx$$

Optimal (type 6, 579 leaves, 17 steps):

$$\frac{3\,b}{\left(a^2+b^2\right) f \left(d\,\mathrm{Sec}[e+f\,x]\right)^{1/3}}-\frac{\sqrt{3}\,b^{4/3}\,\mathrm{ArcTan}\left[\frac{1}{\sqrt{3}}-\frac{2\,b^{1/3}\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}}{\sqrt{3}\left(a^2+b^2\right)^{1/6}}\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}}{2\left(a^2+b^2\right)^{7/6} f \left(d\,\mathrm{Sec}[e+f\,x]\right)^{1/3}}+$$
$$\frac{\sqrt{3}\,b^{4/3}\,\mathrm{ArcTan}\left[\frac{1}{\sqrt{3}}+\frac{2\,b^{1/3}\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}}{\sqrt{3}\left(a^2+b^2\right)^{1/6}}\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}}{2\left(a^2+b^2\right)^{7/6} f \left(d\,\mathrm{Sec}[e+f\,x]\right)^{1/3}}-$$
$$\frac{b^{4/3}\,\mathrm{ArcTanh}\left[\frac{b^{1/3}\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}}{\left(a^2+b^2\right)^{1/6}}\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}}{\left(a^2+b^2\right)^{7/6} f \left(d\,\mathrm{Sec}[e+f\,x]\right)^{1/3}}+$$
$$\left(b^{4/3}\,\mathrm{Log}\left[\left(a^2+b^2\right)^{1/3}-b^{1/3}\left(a^2+b^2\right)^{1/6}\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}+b^{2/3}\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/3}\right]\right.$$
$$\left.\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}\right)\Big/\left(4\left(a^2+b^2\right)^{7/6} f \left(d\,\mathrm{Sec}[e+f\,x]\right)^{1/3}\right)-$$
$$\left(b^{4/3}\,\mathrm{Log}\left[\left(a^2+b^2\right)^{1/3}+b^{1/3}\left(a^2+b^2\right)^{1/6}\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}+b^{2/3}\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/3}\right]\right.$$
$$\left.\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}\right)\Big/\left(4\left(a^2+b^2\right)^{7/6} f \left(d\,\mathrm{Sec}[e+f\,x]\right)^{1/3}\right)+$$
$$\left(\mathrm{AppellF1}\left[\frac{1}{2},1,\frac{7}{6},\frac{3}{2},\frac{b^2\,\mathrm{Tan}[e+f\,x]^2}{a^2},-\mathrm{Tan}[e+f\,x]^2\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}\mathrm{Tan}[e+f\,x]\right)\Big/$$
$$\left(a\,f\left(d\,\mathrm{Sec}[e+f\,x]\right)^{1/3}\right)$$

Result (type 6, 285 leaves):

$$-\left(\left(60\,d\,\mathrm{AppellF1}\left[\frac{7}{3},\frac{7}{6},\frac{7}{6},\frac{10}{3},\frac{a-i\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+i\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]\right.\right.$$
$$\left.\left(a\,\mathrm{Cos}[e+f\,x]+b\,\mathrm{Sin}[e+f\,x]\right)\right)\Big/\left(7\,b\,f\left(d\,\mathrm{Sec}[e+f\,x]\right)^{4/3}\right.$$
$$\left(7\left(a+i\,b\right)\mathrm{AppellF1}\left[\frac{10}{3},\frac{7}{6},\frac{13}{6},\frac{13}{3},\frac{a-i\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+i\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]+\right.$$
$$7\left(a-i\,b\right)\mathrm{AppellF1}\left[\frac{10}{3},\frac{13}{6},\frac{7}{6},\frac{13}{3},\frac{a-i\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+i\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]+$$
$$\left.\left.\left.20\,\mathrm{AppellF1}\left[\frac{7}{3},\frac{7}{6},\frac{7}{6},\frac{10}{3},\frac{a-i\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+i\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]\left(a+b\,\mathrm{Tan}[e+f\,x]\right)\right)\right)\right)$$

Problem 635: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{1}{\left(d\,\mathrm{Sec}[e+f\,x]\right)^{5/3}\left(a+b\,\mathrm{Tan}[e+f\,x]\right)}\,dx$$

Optimal (type 6, 581 leaves, 17 steps):

$$\frac{3\,b}{5\left(a^2+b^2\right)f\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}}+\frac{\sqrt{3}\;b^{8/3}\,\text{ArcTan}\left[\frac{1}{\sqrt{3}}-\frac{2\,b^{1/3}\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{\sqrt{3}\;\left(a^2+b^2\right)^{1/6}}\right]\left(\text{Sec}[e+f\,x]^2\right)^{5/6}}{2\left(a^2+b^2\right)^{11/6}f\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}}-$$

$$\frac{\sqrt{3}\;b^{8/3}\,\text{ArcTan}\left[\frac{1}{\sqrt{3}}+\frac{2\,b^{1/3}\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{\sqrt{3}\;\left(a^2+b^2\right)^{1/6}}\right]\left(\text{Sec}[e+f\,x]^2\right)^{5/6}}{2\left(a^2+b^2\right)^{11/6}f\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}}-$$

$$\frac{b^{8/3}\,\text{ArcTanh}\left[\frac{b^{1/3}\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{\left(a^2+b^2\right)^{1/6}}\right]\left(\text{Sec}[e+f\,x]^2\right)^{5/6}}{\left(a^2+b^2\right)^{11/6}f\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}}+$$

$$\left(b^{8/3}\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}-b^{1/3}\left(a^2+b^2\right)^{1/6}\left(\text{Sec}[e+f\,x]^2\right)^{1/6}+b^{2/3}\left(\text{Sec}[e+f\,x]^2\right)^{1/3}\right]\left(\text{Sec}[e+f\,x]^2\right)^{5/6}\right)\Big/\left(4\left(a^2+b^2\right)^{11/6}f\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}\right)-$$

$$\left(b^{8/3}\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}+b^{1/3}\left(a^2+b^2\right)^{1/6}\left(\text{Sec}[e+f\,x]^2\right)^{1/6}+b^{2/3}\left(\text{Sec}[e+f\,x]^2\right)^{1/3}\right]\left(\text{Sec}[e+f\,x]^2\right)^{5/6}\right)\Big/\left(4\left(a^2+b^2\right)^{11/6}f\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}\right)+$$

$$\left(\text{AppellF1}\left[\frac{1}{2},1,\frac{11}{6},\frac{3}{2},\frac{b^2\,\text{Tan}[e+f\,x]^2}{a^2},-\text{Tan}[e+f\,x]^2\right]\left(\text{Sec}[e+f\,x]^2\right)^{5/6}\text{Tan}[e+f\,x]\right)\Big/\left(a\,f\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}\right)$$

Result (type 6, 18 391 leaves):

$$\left(\frac{3\left(b+a\sqrt{1-\text{Cos}[e+f\,x]^2}\;\text{Sec}[e+f\,x]\right)}{5\left(a^2+b^2\right)\text{Sec}[e+f\,x]^{5/3}}+\right.$$

$$3\left(\left(\left((-1)^{5/6}\,b^{8/3}\,\text{ArcTan}\left[\frac{-\sqrt{3}\;\left(a^2+b^2\right)^{1/6}+2\,(-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f\,x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]\text{Sec}[e+f\,x]^2\right.\right.\right.$$

$$\left.\left.\left(-b+b\,\text{Sec}[e+f\,x]^2+a\,\text{Sec}[e+f\,x]\sqrt{\text{Cos}[e+f\,x]^2\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)\right)\Big/\right.$$

$$\left.\left(6\left(a^2+b^2\right)^{11/6}\left(a\sqrt{1-\text{Cos}[e+f\,x]^2}\;\text{Sec}[e+f\,x]^3+b\,\text{Sec}[e+f\,x]^2\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)\right)+$$

$$\left(\left((-1)^{5/6}\,b^{8/3}\,\text{ArcTan}\left[\frac{\sqrt{3}\;\left(a^2+b^2\right)^{1/6}+2\,(-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f\,x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]\text{Sec}[e+f\,x]^2\right.\right.$$

$$\left.\left.\left(-b+b\,\text{Sec}[e+f\,x]^2+a\,\text{Sec}[e+f\,x]\sqrt{\text{Cos}[e+f\,x]^2\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)\right)\Big/\right.$$

$$\left.\left(6\left(a^2+b^2\right)^{11/6}\left(a\sqrt{1-\text{Cos}[e+f\,x]^2}\;\text{Sec}[e+f\,x]^3+b\,\text{Sec}[e+f\,x]^2\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)\right)+$$

$$\left(\left((-1)^{5/6}\,b^{8/3}\,\text{ArcTan}\left[\frac{(-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f\,x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]\text{Sec}[e+f\,x]^2\right.\right.$$

$$\left.\left.\left(-b+b\,\text{Sec}[e+f\,x]^2+a\,\text{Sec}[e+f\,x]\sqrt{\text{Cos}[e+f\,x]^2\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)\right)\Big/\right.$$

$$\left(3\left(a^2+b^2\right)^{11/6}\left(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)-$$

$$\left(\left(-1\right)^{5/6} b^{8/3}\,\text{Log}\Big[\left(a^2+b^2\right)^{1/3}-\left(-1\right)^{1/6}\sqrt{3}\ b^{1/3}\left(a^2+b^2\right)^{1/6}\text{Sec}[e+f x]^{1/3}+\left(-1\right)^{1/3} b^{2/3}\,\text{Sec}[e+f x]^{2/3}\Big]\,\text{Sec}[e+f x]^2\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\right)\Big/\left(4\sqrt{3}\left(a^2+b^2\right)^{11/6}\left(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)+$$

$$\left(\left(-1\right)^{5/6} b^{8/3}\,\text{Log}\Big[\left(a^2+b^2\right)^{1/3}+\left(-1\right)^{1/6}\sqrt{3}\ b^{1/3}\left(a^2+b^2\right)^{1/6}\text{Sec}[e+f x]^{1/3}+\left(-1\right)^{1/3} b^{2/3}\,\text{Sec}[e+f x]^{2/3}\Big]\,\text{Sec}[e+f x]^2\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\right)\Big/\left(4\sqrt{3}\left(a^2+b^2\right)^{11/6}\left(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)-$$

$$\left(14\,a^3\,\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^{10/3}\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\right)\Big/$$

$$\left(5\left(-1+\text{Sec}[e+f x]^2\right)\left(7\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+3\left(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\right)\text{Sec}[e+f x]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)-$$

$$\left(49\,a\,b^2\,\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^{10/3}\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\right)\Big/$$

$$\left(5\left(-1+\text{Sec}[e+f x]^2\right)\left(7\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+3\left(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\right)\text{Sec}[e+f x]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^3+\right.$$

$$b\,\mathrm{Sec}[e+f x]^2\,\left(-1+\mathrm{Sec}[e+f x]^2\right)\Big)\Big)+$$

$$\Big(26\,a\,b^2\,\mathrm{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\mathrm{Sec}[e+f x]^2,\frac{b^2\,\mathrm{Sec}[e+f x]^2}{a^2+b^2}\right]\mathrm{Sec}[e+f x]^{16/3}$$

$$\sqrt{\mathrm{Cos}[e+f x]^2\,\left(-1+\mathrm{Sec}[e+f x]^2\right)}\,\Big(-b+b\,\mathrm{Sec}[e+f x]^2+$$

$$a\,\mathrm{Sec}[e+f x]\,\sqrt{\mathrm{Cos}[e+f x]^2\,\left(-1+\mathrm{Sec}[e+f x]^2\right)}\Big)\Big)\Big/\Big(35\,\left(-1+\mathrm{Sec}[e+f x]^2\right)$$

$$\Big(13\,\left(a^2+b^2\right)\mathrm{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\mathrm{Sec}[e+f x]^2,\frac{b^2\,\mathrm{Sec}[e+f x]^2}{a^2+b^2}\right]+$$

$$3\,\Big(2\,b^2\,\mathrm{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\mathrm{Sec}[e+f x]^2,\frac{b^2\,\mathrm{Sec}[e+f x]^2}{a^2+b^2}\right]+$$

$$\left(a^2+b^2\right)\mathrm{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\mathrm{Sec}[e+f x]^2,\frac{b^2\,\mathrm{Sec}[e+f x]^2}{a^2+b^2}\right]\Big)\,\mathrm{Sec}[e+f x]^2\Big)$$

$$\left(-a^2+b^2\,\left(-1+\mathrm{Sec}[e+f x]^2\right)\right)\,\Big(a\,\sqrt{1-\mathrm{Cos}[e+f x]^2}\,\mathrm{Sec}[e+f x]^3+$$

$$b\,\mathrm{Sec}[e+f x]^2\,\left(-1+\mathrm{Sec}[e+f x]^2\right)\Big)\Big)\Big)\Big)\Big/$$

$$\Bigg(f\,\left(d\,\mathrm{Sec}[e+f x]\right)^{5/3}\,\left(a+b\,\mathrm{Tan}[e+f x]\right)\,\Bigg(-\frac{\left(b+a\,\sqrt{1-\mathrm{Cos}[e+f x]^2}\,\mathrm{Sec}[e+f x]\right)\mathrm{Sin}[e+f x]}{\left(a^2+b^2\right)\mathrm{Sec}[e+f x]^{2/3}}+$$

$$\frac{3\,\left(\frac{a\,\mathrm{Sin}[e+f x]}{\sqrt{1-\mathrm{Cos}[e+f x]^2}}+a\,\sqrt{1-\mathrm{Cos}[e+f x]^2}\,\mathrm{Sec}[e+f x]\,\mathrm{Tan}[e+f x]\right)}{5\,\left(a^2+b^2\right)\mathrm{Sec}[e+f x]^{5/3}}+$$

$$3\,\Bigg(-\Bigg(\Big(b^3\,\mathrm{Sec}[e+f x]^{10/3}\,\Big(-b+b\,\mathrm{Sec}[e+f x]^2+a\,\mathrm{Sec}[e+f x]$$

$$\sqrt{\mathrm{Cos}[e+f x]^2\,\left(-1+\mathrm{Sec}[e+f x]^2\right)}\Big)\,\mathrm{Sin}[e+f x]\Big)\Big/$$

$$\Bigg(9\,\left(a^2+b^2\right)^2\,\left(1+\frac{\left(-\sqrt{3}\,\left(a^2+b^2\right)^{1/6}+2\,(-1)^{1/6}\,b^{1/3}\,\mathrm{Sec}[e+f x]^{1/3}\right)^2}{\left(a^2+b^2\right)^{1/3}}\right)$$

$$\left(a\,\sqrt{1-\mathrm{Cos}[e+f x]^2}\,\mathrm{Sec}[e+f x]^3+b\,\mathrm{Sec}[e+f x]^2\,\left(-1+\mathrm{Sec}[e+f x]^2\right)\right)\Bigg)\Bigg)-$$

$$\Big(b^3\,\mathrm{Sec}[e+f x]^{10/3}\,\Big(-b+b\,\mathrm{Sec}[e+f x]^2+a\,\mathrm{Sec}[e+f x]$$

$$\sqrt{\mathrm{Cos}[e+f x]^2\,\left(-1+\mathrm{Sec}[e+f x]^2\right)}\Big)\,\mathrm{Sin}[e+f x]\Big)\Big/$$

$$\left(9\left(a^2+b^2\right)^2\left(1+\frac{\left(\sqrt{3}\left(a^2+b^2\right)^{1/6}+2(-1)^{1/6}b^{1/3}\operatorname{Sec}[e+fx]^{1/3}\right)^2}{\left(a^2+b^2\right)^{1/3}}\right)\right.$$
$$\left.\left(a\sqrt{1-\operatorname{Cos}[e+fx]^2}\operatorname{Sec}[e+fx]^3+b\operatorname{Sec}[e+fx]^2\left(-1+\operatorname{Sec}[e+fx]^2\right)\right)\right)-$$
$$\left(b^3\operatorname{Sec}[e+fx]^{10/3}\left(-b+b\operatorname{Sec}[e+fx]^2+a\operatorname{Sec}[e+fx]\right.\right.$$
$$\left.\left.\sqrt{\operatorname{Cos}[e+fx]^2\left(-1+\operatorname{Sec}[e+fx]^2\right)}\right)\operatorname{Sin}[e+fx]\right)\Big/$$
$$\left(9\left(a^2+b^2\right)^2\left(1+\frac{(-1)^{1/3}b^{2/3}\operatorname{Sec}[e+fx]^{2/3}}{\left(a^2+b^2\right)^{1/3}}\right)\left(a\sqrt{1-\operatorname{Cos}[e+fx]^2}\operatorname{Sec}[e+fx]^3+\right.\right.$$
$$\left.\left.b\operatorname{Sec}[e+fx]^2\left(-1+\operatorname{Sec}[e+fx]^2\right)\right)\right)+$$
$$\left(28a^3b^2\operatorname{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]\operatorname{Sec}[e+fx]^{19/3}\right.$$
$$\sqrt{\operatorname{Cos}[e+fx]^2\left(-1+\operatorname{Sec}[e+fx]^2\right)}\left(-b+b\operatorname{Sec}[e+fx]^2+a\operatorname{Sec}[e+fx]\right.$$
$$\left.\left.\sqrt{\operatorname{Cos}[e+fx]^2\left(-1+\operatorname{Sec}[e+fx]^2\right)}\right)\operatorname{Sin}[e+fx]\right)\Big/\left(5\left(-1+\operatorname{Sec}[e+fx]^2\right)\right.$$
$$\left(7\left(a^2+b^2\right)\operatorname{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]+\right.$$
$$3\left(2b^2\operatorname{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$
$$\left.\left.\operatorname{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\operatorname{Sec}[e+fx]^2\right)$$
$$\left(-a^2+b^2\left(-1+\operatorname{Sec}[e+fx]^2\right)\right)^2\left(a\sqrt{1-\operatorname{Cos}[e+fx]^2}\operatorname{Sec}[e+fx]^3+\right.$$
$$\left.\left.b\operatorname{Sec}[e+fx]^2\left(-1+\operatorname{Sec}[e+fx]^2\right)\right)\right)+$$
$$\left(98ab^4\operatorname{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]\operatorname{Sec}[e+fx]^{19/3}\right.$$
$$\sqrt{\operatorname{Cos}[e+fx]^2\left(-1+\operatorname{Sec}[e+fx]^2\right)}\left(-b+b\operatorname{Sec}[e+fx]^2+a\operatorname{Sec}[e+fx]\right.$$
$$\left.\left.\sqrt{\operatorname{Cos}[e+fx]^2\left(-1+\operatorname{Sec}[e+fx]^2\right)}\right)\operatorname{Sin}[e+fx]\right)\Big/\left(5\left(-1+\operatorname{Sec}[e+fx]^2\right)\right.$$
$$\left(7\left(a^2+b^2\right)\operatorname{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]+\right.$$
$$3\left(2b^2\operatorname{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$
$$\left.\left.\operatorname{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\operatorname{Sec}[e+fx]^2\right)$$
$$\left(-a^2+b^2\left(-1+\operatorname{Sec}[e+fx]^2\right)\right)^2\left(a\sqrt{1-\operatorname{Cos}[e+fx]^2}\operatorname{Sec}[e+fx]^3+\right.$$

$$
\begin{aligned}
&\quad b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\Big)\Big)-\\
&\Big(52\,a\,b^4\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^{25/3}\\
&\quad\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\,\Big(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\\
&\qquad\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\Big)\,\text{Sin}[e+f x]\Big)\Big/\Big(35\left(-1+\text{Sec}[e+f x]^2\right)\\
&\quad\Big(13\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\\
&\quad 3\Big(2\,b^2\,\text{AppellF1}\Big[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)\\
&\qquad\text{AppellF1}\Big[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Big)\,\text{Sec}[e+f x]^2\Big)\\
&\quad\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)^2\Big(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+\\
&\quad b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\Big)\Big)+\\
&\Big(28\,a^3\,\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^{19/3}\\
&\quad\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\,\Big(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\\
&\qquad\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\Big)\,\text{Sin}[e+f x]\Big)\Big/\Big(5\left(-1+\text{Sec}[e+f x]^2\right)^2\\
&\quad\Big(7\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\\
&\quad 3\Big(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)\\
&\qquad\text{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Big)\,\text{Sec}[e+f x]^2\Big)\\
&\quad\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Big(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+\\
&\quad b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\Big)\Big)+\\
&\Big(98\,a\,b^2\,\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^{19/3}\\
&\quad\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\,\Big(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\\
&\qquad\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\Big)\,\text{Sin}[e+f x]\Big)\Big/\Big(5\left(-1+\text{Sec}[e+f x]^2\right)^2\\
&\quad\Big(7\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\\
&\quad 3\Big(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)
\end{aligned}
$$

$$\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\Big)\,\text{Sec}[e+fx]^2\Big)$$
$$\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\Big(a\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^3+$$
$$b\,\text{Sec}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)\Big)\Big)-$$
$$\Big(28\,a^3\,\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^{13/3}$$
$$\sqrt{\text{Cos}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)}\,\Big(-b+b\,\text{Sec}[e+fx]^2+a\,\text{Sec}[e+fx]$$
$$\sqrt{\text{Cos}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)}\Big)\,\text{Sin}[e+fx]\Big)\Big/\Big(3\left(-1+\text{Sec}[e+fx]^2\right)$$
$$\Big(7\left(a^2+b^2\right)\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+$$
$$3\,\Big(2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)$$
$$\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\Big)\,\text{Sec}[e+fx]^2\Big)$$
$$\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\Big(a\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^3+$$
$$b\,\text{Sec}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)\Big)\Big)-$$
$$\Big(98\,a\,b^2\,\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]$$
$$\text{Sec}[e+fx]^{13/3}\sqrt{\text{Cos}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)}$$
$$\Big(-b+b\,\text{Sec}[e+fx]^2+a\,\text{Sec}[e+fx]\sqrt{\text{Cos}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)}\Big)$$
$$\text{Sin}[e+fx]\Big)\Big/\Big(3\left(-1+\text{Sec}[e+fx]^2\right)$$
$$\Big(7\left(a^2+b^2\right)\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+$$
$$3\,\Big(2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)$$
$$\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\Big)\,\text{Sec}[e+fx]^2\Big)$$
$$\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\Big(a\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^3+$$
$$b\,\text{Sec}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)\Big)\Big)-$$
$$\Big(52\,a\,b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]$$
$$\text{Sec}[e+fx]^{25/3}\sqrt{\text{Cos}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)}$$
$$\Big(-b+b\,\text{Sec}[e+fx]^2+a\,\text{Sec}[e+fx]\sqrt{\text{Cos}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)}\Big)$$

$$\text{Sin}[e+f x]\Big)\Big/\Big(35\left(-1+\text{Sec}[e+f x]^2\right)^2$$

$$\Big(13\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\Big(2 b^2\,\text{AppellF1}\Big[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)$$

$$\text{AppellF1}\Big[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Big)\,\text{Sec}[e+f x]^2\Big)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Big(a\sqrt{1-\text{Cos}[e+f x]^2}\;\text{Sec}[e+f x]^3+$$

$$b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\Big)\Big)+$$

$$\Big(416\,a\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]$$

$$\text{Sec}[e+f x]^{19/3}\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}$$

$$\Big(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\Big)$$

$$\text{Sin}[e+f x]\Big)\Big/\Big(105\left(-1+\text{Sec}[e+f x]^2\right)$$

$$\Big(13\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\Big(2 b^2\,\text{AppellF1}\Big[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)$$

$$\text{AppellF1}\Big[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Big)\,\text{Sec}[e+f x]^2\Big)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Big(a\sqrt{1-\text{Cos}[e+f x]^2}\;\text{Sec}[e+f x]^3+$$

$$b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\Big)\Big)-\Big(\Big((-1)^{5/6}\,b^{8/3}\,\text{Sec}[e+f x]^2$$

$$\Big(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\Big)$$

$$\Big(-\frac{(-1)^{1/6}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\text{Sec}[e+f x]^{4/3}\,\text{Sin}[e+f x]}{\sqrt{3}}+$$

$$\frac{2}{3}(-1)^{1/3}\,b^{2/3}\,\text{Sec}[e+f x]^{5/3}\,\text{Sin}[e+f x]\Big)\Big)\Big/\Big(4\sqrt{3}\left(a^2+b^2\right)^{11/6}$$

$$\Big(\left(a^2+b^2\right)^{1/3}-(-1)^{1/6}\sqrt{3}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\text{Sec}[e+f x]^{1/3}+(-1)^{1/3}\,b^{2/3}\,\text{Sec}[e+f x]^{2/3}\Big)$$

$$\Big(a\sqrt{1-\text{Cos}[e+f x]^2}\;\text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\Big)\Big)+$$

$$\Big(\Big((-1)^{5/6}\,b^{8/3}\,\text{Sec}[e+f x]^2\Big(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]$$

$$\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\Big)$$

$$\left(\frac{(-1)^{1/6} b^{1/3} \left(a^2+b^2\right)^{1/6} \text{Sec}[e+f x]^{4/3} \text{Sin}[e+f x]}{\sqrt{3}}+\right.$$

$$\left.\left.\frac{2}{3} (-1)^{1/3} b^{2/3} \text{Sec}[e+f x]^{5/3} \text{Sin}[e+f x]\right)\right) \Big/ \left(4 \sqrt{3} \left(a^2+b^2\right)^{11/6}\right.$$

$$\left(\left(a^2+b^2\right)^{1/3}+(-1)^{1/6} \sqrt{3}\, b^{1/3} \left(a^2+b^2\right)^{1/6} \text{Sec}[e+f x]^{1/3}+(-1)^{1/3} b^{2/3} \text{Sec}[e+f x]^{2/3}\right)$$

$$\left.\left(a \sqrt{1-\text{Cos}[e+f x]^2}\, \text{Sec}[e+f x]^3+b\, \text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)\right)+$$

$$\left((-1)^{5/6} b^{8/3} \text{ArcTan}\left[\frac{-\sqrt{3} \left(a^2+b^2\right)^{1/6}+2 (-1)^{1/6} b^{1/3} \text{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right] \text{Sec}[e+f x]^2\right.$$

$$\left(-b+b\, \text{Sec}[e+f x]^2+a\, \text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left.\text{Tan}[e+f x]\right) \Big/ \left(3 \left(a^2+b^2\right)^{11/6}\right.$$

$$\left.\left(a \sqrt{1-\text{Cos}[e+f x]^2}\, \text{Sec}[e+f x]^3+b\, \text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)\right)+$$

$$\left((-1)^{5/6} b^{8/3} \text{ArcTan}\left[\frac{\sqrt{3} \left(a^2+b^2\right)^{1/6}+2 (-1)^{1/6} b^{1/3} \text{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right] \text{Sec}[e+f x]^2\right.$$

$$\left(-b+b\, \text{Sec}[e+f x]^2+a\, \text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left.\text{Tan}[e+f x]\right) \Big/ \left(3 \left(a^2+b^2\right)^{11/6}\right.$$

$$\left.\left(a \sqrt{1-\text{Cos}[e+f x]^2}\, \text{Sec}[e+f x]^3+b\, \text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)\right)+$$

$$\left(2 (-1)^{5/6} b^{8/3} \text{ArcTan}\left[\frac{(-1)^{1/6} b^{1/3} \text{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right] \text{Sec}[e+f x]^2\right.$$

$$\left(-b+b\, \text{Sec}[e+f x]^2+a\, \text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left.\text{Tan}[e+f x]\right) \Big/ \left(3 \left(a^2+b^2\right)^{11/6}\right.$$

$$\left.\left(a \sqrt{1-\text{Cos}[e+f x]^2}\, \text{Sec}[e+f x]^3+b\, \text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)\right)-$$

$$\left((-1)^{5/6} b^{8/3} \text{Log}\left[\left(a^2+b^2\right)^{1/3}-(-1)^{1/6} \sqrt{3}\, b^{1/3} \left(a^2+b^2\right)^{1/6} \text{Sec}[e+f x]^{1/3}+\right.\right.$$

$$\left.(-1)^{1/3} b^{2/3} \text{Sec}[e+f x]^{2/3}\right] \text{Sec}[e+f x]^2$$

$$\left(-b+b\, \text{Sec}[e+f x]^2+a\, \text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left.\text{Tan}[e+f x]\right) \Big/ \left(2 \sqrt{3} \left(a^2+b^2\right)^{11/6}\right.$$

$$\left.\left(a \sqrt{1-\text{Cos}[e+f x]^2}\, \text{Sec}[e+f x]^3+b\, \text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)\right)+$$

$$\left((-1)^{5/6} b^{8/3} \text{Log}\left[\left(a^2+b^2\right)^{1/3}+(-1)^{1/6} \sqrt{3}\, b^{1/3} \left(a^2+b^2\right)^{1/6} \text{Sec}[e+f x]^{1/3}+\right.\right.$$

$$\left.(-1)^{1/3} b^{2/3} \text{Sec}[e+f x]^{2/3}\right] \text{Sec}[e+f x]^2$$

$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\text{Tan}[e+f x]\Bigg)\Bigg/\left(2\sqrt{3}\,\left(a^2+b^2\right)^{11/6}\right.$$

$$\left.\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)-$$

$$\left(7\,a^3\,\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f x]^{10/3}\right.$$

$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left.\left(-2\,\text{Cos}[e+f x]\,\left(-1+\text{Sec}[e+f x]^2\right)\,\text{Sin}[e+f x]+2\,\text{Tan}[e+f x]\right)\right)\Bigg/$$

$$\left(5\,\left(-1+\text{Sec}[e+f x]^2\right)\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}\right.$$

$$\left(7\,\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$

$$3\,\left(2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$

$$\left.\left.\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right)\,\text{Sec}[e+f x]^2\right)$$

$$\left(-a^2+b^2\,\left(-1+\text{Sec}[e+f x]^2\right)\right)\,\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+\right.$$

$$\left.\left.b\,\text{Sec}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)-$$

$$\left(49\,a\,b^2\,\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f x]^{10/3}\right.$$

$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left.\left(-2\,\text{Cos}[e+f x]\,\left(-1+\text{Sec}[e+f x]^2\right)\,\text{Sin}[e+f x]+2\,\text{Tan}[e+f x]\right)\right)\Bigg/$$

$$\left(10\,\left(-1+\text{Sec}[e+f x]^2\right)\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}\right.$$

$$\left(7\,\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$

$$3\,\left(2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$

$$\left.\left.\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right)\,\text{Sec}[e+f x]^2\right)$$

$$\left(-a^2+b^2\,\left(-1+\text{Sec}[e+f x]^2\right)\right)\,\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+\right.$$

$$\left.\left.b\,\text{Sec}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)+$$

$$\left(13\,a\,b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f x]^{16/3}\right.$$

$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left(-2\,\text{Cos}[e+f\,x]\,\left(-1+\text{Sec}[e+f\,x]^2\right)\,\text{Sin}[e+f\,x]+2\,\text{Tan}[e+f\,x]\right)\bigg)\bigg/$$

$$\Bigg(35\,\left(-1+\text{Sec}[e+f\,x]^2\right)\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}$$

$$\left(13\,\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{7}{6},\,\frac{1}{2},\,1,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$

$$3\,\left(2\,b^2\,\text{AppellF1}\left[\frac{13}{6},\,\frac{1}{2},\,2,\,\frac{19}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$

$$\left.\left.\text{AppellF1}\left[\frac{13}{6},\,\frac{3}{2},\,1,\,\frac{19}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right)\,\text{Sec}[e+f\,x]^2\right)$$

$$\left(-a^2+b^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\,\left(a\,\sqrt{1-\text{Cos}[e+f\,x]^2}\,\text{Sec}[e+f\,x]^3+\right.$$

$$\left.\left.b\,\text{Sec}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)-$$

$$\Bigg(14\,a^3\,\text{Sec}[e+f\,x]^{10/3}\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}$$

$$\left(-b+b\,\text{Sec}[e+f\,x]^2+a\,\text{Sec}[e+f\,x]\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)$$

$$\left(\frac{1}{7\,\left(a^2+b^2\right)}2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\,\frac{1}{2},\,2,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f\,x]^2\right.$$

$$\text{Tan}[e+f\,x]+\frac{1}{7}\,\text{AppellF1}\left[\frac{7}{6},\,\frac{3}{2},\,1,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]$$

$$\left.\text{Sec}[e+f\,x]^2\,\text{Tan}[e+f\,x]\right)\Bigg)\bigg/\,\Bigg(5\,\left(-1+\text{Sec}[e+f\,x]^2\right)$$

$$\left(7\,\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{1}{6},\,\frac{1}{2},\,1,\,\frac{7}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$

$$3\,\left(2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\,\frac{1}{2},\,2,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$

$$\left.\left.\text{AppellF1}\left[\frac{7}{6},\,\frac{3}{2},\,1,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right)\,\text{Sec}[e+f\,x]^2\right)$$

$$\left(-a^2+b^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\,\left(a\,\sqrt{1-\text{Cos}[e+f\,x]^2}\,\text{Sec}[e+f\,x]^3+\right.$$

$$\left.\left.b\,\text{Sec}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)-$$

$$\Bigg(49\,a\,b^2\,\text{Sec}[e+f\,x]^{10/3}\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}$$

$$\left(-b+b\,\text{Sec}[e+f\,x]^2+a\,\text{Sec}[e+f\,x]\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)$$

$$\left(\frac{1}{7\,\left(a^2+b^2\right)}2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\,\frac{1}{2},\,2,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f\,x]^2\right.$$

$$\text{Tan}[e+f\,x]+\frac{1}{7}\,\text{AppellF1}\left[\frac{7}{6},\,\frac{3}{2},\,1,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]$$

$$\left.\text{Sec}[e+f\,x]^2\,\text{Tan}[e+f\,x]\right)\Bigg)\bigg/\,\Bigg(5\,\left(-1+\text{Sec}[e+f\,x]^2\right)$$

$$\left(7\left(a^2+b^2\right)\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+3\left(2b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\text{Sec}[e+fx]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^3+b\,\text{Sec}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\Bigg)+$$

$$\Bigg(26\,a\,b^2\,\text{Sec}[e+fx]^{16/3}\sqrt{\text{Cos}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)}\left(-b+b\,\text{Sec}[e+fx]^2+a\,\text{Sec}[e+fx]\sqrt{\text{Cos}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)}\right)\left(\frac{1}{13\left(a^2+b^2\right)}14\,b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]+\frac{7}{13}\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\right)\Bigg)\Bigg/\Bigg(35\left(-1+\text{Sec}[e+fx]^2\right)$$

$$\left(13\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+3\left(2b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\text{Sec}[e+fx]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^3+b\,\text{Sec}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\Bigg)-$$

$$\Bigg(\left(-1\right)^{5/6}b^{8/3}\,\text{ArcTan}\left[\frac{-\sqrt{3}\left(a^2+b^2\right)^{1/6}+2\left(-1\right)^{1/6}b^{1/3}\,\text{Sec}[e+fx]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]\text{Sec}[e+fx]^2\left(-b+b\,\text{Sec}[e+fx]^2+a\,\text{Sec}[e+fx]\sqrt{\text{Cos}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)}\right)\left(\frac{a\,\text{Sec}[e+fx]\,\text{Tan}[e+fx]}{\sqrt{1-\text{Cos}[e+fx]^2}}+3a\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^3\,\text{Tan}[e+fx]+2b\,\text{Sec}[e+fx]^4\,\text{Tan}[e+fx]+2b\,\text{Sec}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)\text{Tan}[e+fx]\right)\Bigg)\Bigg/$$

$$\Bigg(6\left(a^2+b^2\right)^{11/6}\left(a\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^3+b\,\text{Sec}[e+fx]^2\right.$$

$$\left(-1+\text{Sec}[e+f x]^2\right)\Big)^2\Big) -$$

$$\Bigg((-1)^{5/6}\, b^{8/3}\, \text{ArcTan}\Big[\frac{\sqrt{3}\,\left(a^2+b^2\right)^{1/6}+2\,(-1)^{1/6}\, b^{1/3}\, \text{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\Big]\, \text{Sec}[e+f x]^2$$

$$\left(-b+b\, \text{Sec}[e+f x]^2+a\, \text{Sec}[e+f x]\, \sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\Bigg(\frac{a\, \text{Sec}[e+f x]\, \text{Tan}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+3\, a\, \sqrt{1-\text{Cos}[e+f x]^2}\, \text{Sec}[e+f x]^3\, \text{Tan}[e+f x]+$$

$$2\, b\, \text{Sec}[e+f x]^4\, \text{Tan}[e+f x]+2\, b\, \text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\text{Tan}[e+f x]\Bigg)\Bigg)\Big/$$

$$\Bigg(6\,\left(a^2+b^2\right)^{11/6}\Big(a\, \sqrt{1-\text{Cos}[e+f x]^2}\, \text{Sec}[e+f x]^3+b\, \text{Sec}[e+f x]^2$$

$$\left(-1+\text{Sec}[e+f x]^2\right)\Big)^2\Bigg) -$$

$$\Bigg((-1)^{5/6}\, b^{8/3}\, \text{ArcTan}\Big[\frac{(-1)^{1/6}\, b^{1/3}\, \text{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\Big]\, \text{Sec}[e+f x]^2$$

$$\left(-b+b\, \text{Sec}[e+f x]^2+a\, \text{Sec}[e+f x]\, \sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\Bigg(\frac{a\, \text{Sec}[e+f x]\, \text{Tan}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+3\, a\, \sqrt{1-\text{Cos}[e+f x]^2}\, \text{Sec}[e+f x]^3\, \text{Tan}[e+f x]+$$

$$2\, b\, \text{Sec}[e+f x]^4\, \text{Tan}[e+f x]+2\, b\, \text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\text{Tan}[e+f x]\Bigg)\Bigg)\Big/$$

$$\Bigg(3\,\left(a^2+b^2\right)^{11/6}\Big(a\, \sqrt{1-\text{Cos}[e+f x]^2}\, \text{Sec}[e+f x]^3+b\, \text{Sec}[e+f x]^2$$

$$\left(-1+\text{Sec}[e+f x]^2\right)\Big)^2\Bigg) +$$

$$\Bigg((-1)^{5/6}\, b^{8/3}\, \text{Log}\Big[\left(a^2+b^2\right)^{1/3}-(-1)^{1/6}\sqrt{3}\, b^{1/3}\left(a^2+b^2\right)^{1/6}\, \text{Sec}[e+f x]^{1/3}+$$

$$(-1)^{1/3}\, b^{2/3}\, \text{Sec}[e+f x]^{2/3}\Big]\, \text{Sec}[e+f x]^2$$

$$\left(-b+b\, \text{Sec}[e+f x]^2+a\, \text{Sec}[e+f x]\, \sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\Bigg(\frac{a\, \text{Sec}[e+f x]\, \text{Tan}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+3\, a\, \sqrt{1-\text{Cos}[e+f x]^2}\, \text{Sec}[e+f x]^3\, \text{Tan}[e+f x]+$$

$$2\, b\, \text{Sec}[e+f x]^4\, \text{Tan}[e+f x]+2\, b\, \text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\text{Tan}[e+f x]\Bigg)\Bigg)\Big/$$

$$\left(4\sqrt{3}\,\left(a^2+b^2\right)^{11/6}\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\right)^2\right)-$$

$$\left((-1)^{5/6}\,b^{8/3}\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}+(-1)^{1/6}\sqrt{3}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\text{Sec}[e+f x]^{1/3}+(-1)^{1/3}\,b^{2/3}\,\text{Sec}[e+f x]^{2/3}\right]\text{Sec}[e+f x]^2\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\left(\frac{a\,\text{Sec}[e+f x]\,\text{Tan}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+3\,a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3\,\text{Tan}[e+f x]+2\,b\,\text{Sec}[e+f x]^4\,\text{Tan}[e+f x]+2\,b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\text{Tan}[e+f x]\right)\right)\Big/$$

$$\left(4\sqrt{3}\,\left(a^2+b^2\right)^{11/6}\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\right)^2\right)+$$

$$\left(14\,a^3\,\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\text{Sec}[e+f x]^{10/3}\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\left(\frac{a\,\text{Sec}[e+f x]\,\text{Tan}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+3\,a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3\,\text{Tan}[e+f x]+2\,b\,\text{Sec}[e+f x]^4\,\text{Tan}[e+f x]+2\,b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\text{Tan}[e+f x]\right)\right)\Big/$$

$$\left(5\left(-1+\text{Sec}[e+f x]^2\right)\left(7\left(a^2+b^2\right)\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+3\left(2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right)\text{Sec}[e+f x]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\right)^2\right)+$$

$$\left(49\,a\,b^2\,\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right.$$

$$\text{Sec}[e+f x]^{10/3} \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)}$$
$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)}\right)$$
$$\left(\frac{a\,\text{Sec}[e+f x]\,\text{Tan}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+3 a \sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3\,\text{Tan}[e+f x]+\right.$$
$$\left.\left.2 b\,\text{Sec}[e+f x]^4\,\text{Tan}[e+f x]+2 b\,\text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right) \text{Tan}[e+f x]\right)\right) \Big/$$
$$\left(5 \left(-1+\text{Sec}[e+f x]^2\right) \left(7 \left(a^2+b^2\right) \text{AppellF1}\left[\frac{1}{6}, \frac{1}{2}, 1, \frac{7}{6}, \text{Sec}[e+f x]^2,\right.\right.\right.$$
$$\left.\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+3 \left(2 b^2\,\text{AppellF1}\left[\frac{7}{6}, \frac{1}{2}, 2, \frac{13}{6}, \text{Sec}[e+f x]^2,\right.\right.$$
$$\left.\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right) \text{AppellF1}\left[\frac{7}{6}, \frac{3}{2}, 1, \frac{13}{6}, \text{Sec}[e+f x]^2,\right.$$
$$\left.\left.\left.\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right) \text{Sec}[e+f x]^2\right) \left(-a^2+b^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)$$
$$\left.\left(a \sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)^2\right)-$$
$$\left(26 a b^2\,\text{AppellF1}\left[\frac{7}{6}, \frac{1}{2}, 1, \frac{13}{6}, \text{Sec}[e+f x]^2, \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right.$$
$$\text{Sec}[e+f x]^{16/3} \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)}$$
$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)}\right)$$
$$\left(\frac{a\,\text{Sec}[e+f x]\,\text{Tan}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+3 a \sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3\,\text{Tan}[e+f x]+\right.$$
$$\left.\left.2 b\,\text{Sec}[e+f x]^4\,\text{Tan}[e+f x]+2 b\,\text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right) \text{Tan}[e+f x]\right)\right) \Big/$$
$$\left(35 \left(-1+\text{Sec}[e+f x]^2\right) \left(13 \left(a^2+b^2\right) \text{AppellF1}\left[\frac{7}{6}, \frac{1}{2}, 1, \frac{13}{6}, \text{Sec}[e+f x]^2,\right.\right.\right.$$
$$\left.\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+3 \left(2 b^2\,\text{AppellF1}\left[\frac{13}{6}, \frac{1}{2}, 2, \frac{19}{6}, \text{Sec}[e+f x]^2,\right.\right.$$
$$\left.\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right) \text{AppellF1}\left[\frac{13}{6}, \frac{3}{2}, 1, \frac{19}{6}, \text{Sec}[e+f x]^2,\right.$$
$$\left.\left.\left.\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right) \text{Sec}[e+f x]^2\right) \left(-a^2+b^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)$$
$$\left.\left(a \sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)^2\right)+$$
$$\left((-1)^{5/6} b^{8/3}\,\text{ArcTan}\left[\frac{-\sqrt{3} \left(a^2+b^2\right)^{1/6}+2 (-1)^{1/6} b^{1/3}\,\text{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]\right.$$

$$\text{Sec}[e+f x]^2 \left(2 b \,\text{Sec}[e+f x]^2 \,\text{Tan}[e+f x] + a \,\text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)} \,\text{Tan}[e+f x] + \left(a \,\text{Sec}[e+f x] \left(-2 \,\text{Cos}[e+f x] \left(-1+\text{Sec}[e+f x]^2\right) \text{Sin}[e+f x] + 2 \,\text{Tan}[e+f x]\right)\right) \Big/ \left(2 \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)}\right)\right)\right) \Big/ \left(6 \left(a^2+b^2\right)^{11/6} \left(a \sqrt{1-\text{Cos}[e+f x]^2} \,\text{Sec}[e+f x]^3 + b \,\text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)\right) +$$

$$\left(\left(-1\right)^{5/6} b^{8/3} \,\text{ArcTan}\left[\frac{\sqrt{3} \left(a^2+b^2\right)^{1/6} + 2 \left(-1\right)^{1/6} b^{1/3} \,\text{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right] \text{Sec}[e+f x]^2 \left(2 b \,\text{Sec}[e+f x]^2 \,\text{Tan}[e+f x] + a \,\text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)} \,\text{Tan}[e+f x] + \left(a \,\text{Sec}[e+f x] \left(-2 \,\text{Cos}[e+f x] \left(-1+\text{Sec}[e+f x]^2\right) \text{Sin}[e+f x] + 2 \,\text{Tan}[e+f x]\right)\right) \Big/ \left(2 \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)}\right)\right)\right) \Big/ \left(6 \left(a^2+b^2\right)^{11/6} \left(a \sqrt{1-\text{Cos}[e+f x]^2} \,\text{Sec}[e+f x]^3 + b \,\text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)\right) +$$

$$\left(\left(-1\right)^{5/6} b^{8/3} \,\text{ArcTan}\left[\frac{\left(-1\right)^{1/6} b^{1/3} \,\text{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right] \text{Sec}[e+f x]^2 \left(2 b \,\text{Sec}[e+f x]^2 \,\text{Tan}[e+f x] + a \,\text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)} \,\text{Tan}[e+f x] + \left(a \,\text{Sec}[e+f x] \left(-2 \,\text{Cos}[e+f x] \left(-1+\text{Sec}[e+f x]^2\right) \text{Sin}[e+f x] + 2 \,\text{Tan}[e+f x]\right)\right) \Big/ \left(2 \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)}\right)\right)\right) \Big/ \left(3 \left(a^2+b^2\right)^{11/6} \left(a \sqrt{1-\text{Cos}[e+f x]^2} \,\text{Sec}[e+f x]^3 + b \,\text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)\right) -$$

$$\left(\left(-1\right)^{5/6} b^{8/3} \,\text{Log}\left[\left(a^2+b^2\right)^{1/3} - \left(-1\right)^{1/6} \sqrt{3} \,b^{1/3} \left(a^2+b^2\right)^{1/6} \,\text{Sec}[e+f x]^{1/3} + \left(-1\right)^{1/3} b^{2/3} \,\text{Sec}[e+f x]^{2/3}\right] \text{Sec}[e+f x]^2 \left(2 b \,\text{Sec}[e+f x]^2 \,\text{Tan}[e+f x] + a \,\text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)} \,\text{Tan}[e+f x] + \left(a \,\text{Sec}[e+f x] \left(-2 \,\text{Cos}[e+f x] \left(-1+\text{Sec}[e+f x]^2\right) \text{Sin}[e+f x] + 2 \,\text{Tan}[e+f x]\right)\right) \Big/ \left(2 \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)}\right)\right)\right) \Big/ \left(4 \sqrt{3} \left(a^2+b^2\right)^{11/6} \left(a \sqrt{1-\text{Cos}[e+f x]^2} \,\text{Sec}[e+f x]^3 + b \,\text{Sec}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)\right) +$$

$$\left(\left(-1\right)^{5/6} b^{8/3} \,\text{Log}\left[\left(a^2+b^2\right)^{1/3} + \left(-1\right)^{1/6} \sqrt{3} \,b^{1/3} \left(a^2+b^2\right)^{1/6} \,\text{Sec}[e+f x]^{1/3} + \left(-1\right)^{1/3} b^{2/3} \,\text{Sec}[e+f x]^{2/3}\right] \text{Sec}[e+f x]^2 \left(2 b \,\text{Sec}[e+f x]^2 \,\text{Tan}[e+f x] + a \,\text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2 \left(-1+\text{Sec}[e+f x]^2\right)} \,\text{Tan}[e+f x] +\right.$$

$$\left(a\,\text{Sec}[e+f x]\left(-2\,\text{Cos}[e+f x]\left(-1+\text{Sec}[e+f x]^2\right)\text{Sin}[e+f x]+2\,\text{Tan}[e+f x]\right)\right)\Big/$$
$$\left(2\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\Bigg)\Bigg)\Bigg/\left(4\sqrt{3}\left(a^2+b^2\right)^{11/6}\right.$$
$$\left.\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)-$$
$$\Bigg(14\,a^3\,\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\text{Sec}[e+f x]^{10/3}$$
$$\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\;\Bigg(2\,b\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+$$
$$a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\;\text{Tan}[e+f x]+$$
$$\left(a\,\text{Sec}[e+f x]\left(-2\,\text{Cos}[e+f x]\left(-1+\text{Sec}[e+f x]^2\right)\text{Sin}[e+f x]+2\,\text{Tan}[e+f x]\right)\right)\Big/$$
$$\left(2\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\Bigg)\Bigg)\Bigg/\Bigg(5\left(-1+\text{Sec}[e+f x]^2\right)$$
$$\Bigg(7\left(a^2+b^2\right)\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+$$
$$3\Bigg(2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)$$
$$\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\Bigg)\text{Sec}[e+f x]^2\Bigg)$$
$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Bigg(a\sqrt{1-\text{Cos}[e+f x]^2}\;\text{Sec}[e+f x]^3+$$
$$b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\Bigg)\Bigg)-$$
$$\Bigg(49\,a\,b^2\,\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\text{Sec}[e+f x]^{10/3}$$
$$\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\;\Bigg(2\,b\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+$$
$$a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\;\text{Tan}[e+f x]+$$
$$\left(a\,\text{Sec}[e+f x]\left(-2\,\text{Cos}[e+f x]\left(-1+\text{Sec}[e+f x]^2\right)\text{Sin}[e+f x]+2\,\text{Tan}[e+f x]\right)\right)\Big/$$
$$\left(2\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\Bigg)\Bigg)\Bigg/\Bigg(5\left(-1+\text{Sec}[e+f x]^2\right)$$
$$\Bigg(7\left(a^2+b^2\right)\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+$$
$$3\Bigg(2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)$$
$$\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\Bigg)\text{Sec}[e+f x]^2\Bigg)$$
$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Bigg(a\sqrt{1-\text{Cos}[e+f x]^2}\;\text{Sec}[e+f x]^3+$$
$$b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\Bigg)\Bigg)+$$

$$\left(26\,a\,b^2\,\text{AppellF1}\left[\frac{7}{6},\,\frac{1}{2},\,1,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f\,x]^{16/3}\right.$$

$$\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}\,\left(2\,b\,\text{Sec}[e+f\,x]^2\,\text{Tan}[e+f\,x]+\right.$$

$$a\,\text{Sec}[e+f\,x]\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}\,\text{Tan}[e+f\,x]+$$

$$\left(a\,\text{Sec}[e+f\,x]\,\left(-2\,\text{Cos}[e+f\,x]\,\left(-1+\text{Sec}[e+f\,x]^2\right)\,\text{Sin}[e+f\,x]+2\,\text{Tan}[e+f\,x]\right)\right)\Big/$$

$$\left.\left.\left(2\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)\right)\right)\Big/\left(35\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right.$$

$$\left(13\,\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{7}{6},\,\frac{1}{2},\,1,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$

$$3\,\left(2\,b^2\,\text{AppellF1}\left[\frac{13}{6},\,\frac{1}{2},\,2,\,\frac{19}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$

$$\left.\left.\text{AppellF1}\left[\frac{13}{6},\,\frac{3}{2},\,1,\,\frac{19}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right)\,\text{Sec}[e+f\,x]^2\right)$$

$$\left(-a^2+b^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\,\left(a\,\sqrt{1-\text{Cos}[e+f\,x]^2}\,\text{Sec}[e+f\,x]^3+\right.$$

$$\left.\left.b\,\text{Sec}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)+$$

$$\left(14\,a^3\,\text{AppellF1}\left[\frac{1}{6},\,\frac{1}{2},\,1,\,\frac{7}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f\,x]^{10/3}\right.$$

$$\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}$$

$$\left(-b+b\,\text{Sec}[e+f\,x]^2+a\,\text{Sec}[e+f\,x]\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)$$

$$\left(6\,\left(2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\,\frac{1}{2},\,2,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.\right.$$

$$\left.\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{7}{6},\,\frac{3}{2},\,1,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right)$$

$$\text{Sec}[e+f\,x]^2\,\text{Tan}[e+f\,x]+7\,\left(a^2+b^2\right)\,\left(\frac{1}{7\,\left(a^2+b^2\right)}2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\,\frac{1}{2},\,2,\right.\right.$$

$$\left.\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f\,x]^2\,\text{Tan}[e+f\,x]+\frac{1}{7}\,\text{AppellF1}\left[\right.$$

$$\left.\left.\frac{7}{6},\,\frac{3}{2},\,1,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f\,x]^2\,\text{Tan}[e+f\,x]\right)+$$

$$3\,\text{Sec}[e+f\,x]^2\,\left(2\,b^2\,\left(\frac{1}{13\,\left(a^2+b^2\right)}28\,b^2\,\text{AppellF1}\left[\frac{13}{6},\,\frac{1}{2},\,3,\,\frac{19}{6},\,\text{Sec}[e+f\,x]^2,\right.\right.\right.$$

$$\left.\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f\,x]^2\,\text{Tan}[e+f\,x]+\frac{7}{13}\,\text{AppellF1}\left[\frac{13}{6},\,\frac{3}{2},\,2,\,\frac{19}{6},\right.$$

$$\left.\left.\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f\,x]^2\,\text{Tan}[e+f\,x]\right)+\left(a^2+b^2\right)$$

$$\left(\frac{1}{13\,\left(a^2+b^2\right)}14\,b^2\,\text{AppellF1}\left[\frac{13}{6},\,\frac{3}{2},\,2,\,\frac{19}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right.$$

$$\text{Sec}[e+f x]^2 \,\text{Tan}[e+f x]+\frac{21}{13}\,\text{AppellF1}\Big[\frac{13}{6},\frac{5}{2},1,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\Big)\Big)\Big)\Big)\Big)\Big/\Big(5\,\big(-1+\text{Sec}[e+f x]^2\big)$$

$$\Big(7\,\big(a^2+b^2\big)\,\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+3\Big(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\big(a^2+b^2\big)\,\text{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Big)\,\text{Sec}[e+f x]^2\Big)^2$$

$$\Big(-a^2+b^2\,\big(-1+\text{Sec}[e+f x]^2\big)\Big)\,\Big(a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2\,\big(-1+\text{Sec}[e+f x]^2\big)\Big)\Big)+$$

$$\Big(49\,a\,b^2\,\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]$$

$$\text{Sec}[e+f x]^{10/3}\,\sqrt{\text{Cos}[e+f x]^2\,\big(-1+\text{Sec}[e+f x]^2\big)}$$

$$\Big(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\,\big(-1+\text{Sec}[e+f x]^2\big)}\Big)$$

$$\Big(6\,\Big(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\big(a^2+b^2\big)\,\text{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Big)$$

$$\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+7\,\big(a^2+b^2\big)\,\Big(\frac{1}{7\,\big(a^2+b^2\big)}2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+\frac{1}{7}\,\text{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\Big)+$$

$$3\,\text{Sec}[e+f x]^2\,\Big(2\,b^2\,\Big(\frac{1}{13\,\big(a^2+b^2\big)}28\,b^2\,\text{AppellF1}\Big[\frac{13}{6},\frac{1}{2},3,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+\frac{7}{13}\,\text{AppellF1}\Big[\frac{13}{6},\frac{3}{2},2,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\Big)+\big(a^2+b^2\big)$$

$$\Big(\frac{1}{13\,\big(a^2+b^2\big)}14\,b^2\,\text{AppellF1}\Big[\frac{13}{6},\frac{3}{2},2,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]$$

$$\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+\frac{21}{13}\,\text{AppellF1}\Big[\frac{13}{6},\frac{5}{2},1,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\Big)\Big)\Big)\Big)\Big)\Big/\Big(5\,\big(-1+\text{Sec}[e+f x]^2\big)$$

$$\left(7\left(a^2+b^2\right)\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+3\left(2 b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right)\text{Sec}[e+f x]^2\right)^2$$
$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Bigg)-$$
$$\Bigg(26\,a\,b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\text{Sec}[e+f x]^{16/3}\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}$$
$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$
$$\Bigg(6\left(2 b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right)\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+$$
$$13\left(a^2+b^2\right)\left(\frac{1}{13\left(a^2+b^2\right)}14 b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+\frac{7}{13}\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\right)+$$
$$3\,\text{Sec}[e+f x]^2\Bigg(2 b^2\left(\frac{1}{19\left(a^2+b^2\right)}52 b^2\,\text{AppellF1}\left[\frac{19}{6},\frac{1}{2},3,\frac{25}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+\frac{13}{19}\text{AppellF1}\left[\frac{19}{6},\frac{3}{2},2,\frac{25}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\right)+\left(a^2+b^2\right)$$
$$\left(\frac{1}{19\left(a^2+b^2\right)}26 b^2\,\text{AppellF1}\left[\frac{19}{6},\frac{3}{2},2,\frac{25}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+\frac{39}{19}\text{AppellF1}\left[\frac{19}{6},\frac{5}{2},1,\frac{25}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\right)\Bigg)\Bigg)\Bigg)\Bigg/\left(35\left(-1+\text{Sec}[e+f x]^2\right)\right.$$
$$\Bigg(13\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+3\left(2 b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$

$$\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f x]^2\Bigg)^2$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+\right.$$

$$\left.\left.\left.\left.b\,\text{Sec}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)\right)\right)$$

Problem 636: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\frac{(d\,\text{Sec}[e+f x])^{5/3}}{(a+b\,\text{Tan}[e+f x])^2}\,dx$$

Optimal (type 6, 687 leaves, 18 steps):

$$-\frac{a\,\text{ArcTan}\left[\frac{1}{\sqrt{3}}-\frac{2\,b^{1/3}\left(\text{Sec}[e+f x]^2\right)^{1/6}}{\sqrt{3}\left(a^2+b^2\right)^{1/6}}\right](d\,\text{Sec}[e+f x])^{5/3}}{2\sqrt{3}\,b^{2/3}\left(a^2+b^2\right)^{7/6}f\left(\text{Sec}[e+f x]^2\right)^{5/6}}+$$

$$\frac{a\,\text{ArcTan}\left[\frac{1}{\sqrt{3}}+\frac{2\,b^{1/3}\left(\text{Sec}[e+f x]^2\right)^{1/6}}{\sqrt{3}\left(a^2+b^2\right)^{1/6}}\right](d\,\text{Sec}[e+f x])^{5/3}}{2\sqrt{3}\,b^{2/3}\left(a^2+b^2\right)^{7/6}f\left(\text{Sec}[e+f x]^2\right)^{5/6}}-$$

$$\frac{a\,\text{ArcTanh}\left[\frac{b^{1/3}\left(\text{Sec}[e+f x]^2\right)^{1/6}}{\left(a^2+b^2\right)^{1/6}}\right](d\,\text{Sec}[e+f x])^{5/3}}{3\,b^{2/3}\left(a^2+b^2\right)^{7/6}f\left(\text{Sec}[e+f x]^2\right)^{5/6}}+$$

$$\left(a\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}-b^{1/3}\left(a^2+b^2\right)^{1/6}\left(\text{Sec}[e+f x]^2\right)^{1/6}+b^{2/3}\left(\text{Sec}[e+f x]^2\right)^{1/3}\right]\right.$$
$$\left.(d\,\text{Sec}[e+f x])^{5/3}\right)\Big/\left(12\,b^{2/3}\left(a^2+b^2\right)^{7/6}f\left(\text{Sec}[e+f x]^2\right)^{5/6}\right)-$$

$$\left(a\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}+b^{1/3}\left(a^2+b^2\right)^{1/6}\left(\text{Sec}[e+f x]^2\right)^{1/6}+b^{2/3}\left(\text{Sec}[e+f x]^2\right)^{1/3}\right]\right.$$
$$\left.(d\,\text{Sec}[e+f x])^{5/3}\right)\Big/\left(12\,b^{2/3}\left(a^2+b^2\right)^{7/6}f\left(\text{Sec}[e+f x]^2\right)^{5/6}\right)+$$

$$\left(\text{AppellF1}\left[\frac{1}{2},2,\frac{1}{6},\frac{3}{2},\frac{b^2\,\text{Tan}[e+f x]^2}{a^2},-\text{Tan}[e+f x]^2\right](d\,\text{Sec}[e+f x])^{5/3}\,\text{Tan}[e+f x]\right)\Big/$$
$$\left(a^2 f\left(\text{Sec}[e+f x]^2\right)^{5/6}\right)+$$

$$\left(b^2\,\text{AppellF1}\left[\frac{3}{2},2,\frac{1}{6},\frac{5}{2},\frac{b^2\,\text{Tan}[e+f x]^2}{a^2},-\text{Tan}[e+f x]^2\right](d\,\text{Sec}[e+f x])^{5/3}\,\text{Tan}[e+f x]^3\right)\Big/$$
$$\left(3\,a^4 f\left(\text{Sec}[e+f x]^2\right)^{5/6}\right)-\frac{a\,b\,(d\,\text{Sec}[e+f x])^{5/3}}{\left(a^2+b^2\right)f\left(a^2-b^2\,\text{Tan}[e+f x]^2\right)}$$

Result (type 6, 19462 leaves):

$$\left(\text{Sec}[e+f x]\,(d\,\text{Sec}[e+f x])^{5/3}\,(a\,\text{Cos}[e+f x]+b\,\text{Sin}[e+f x])^2\left(\frac{b\,\text{Cos}[e+f x]}{a\,(a-i\,b)\,(a+i\,b)}+\right.\right.$$

$$\frac{\text{Sin}[e+f x]}{(a-\mathbb{i} b)\ (a+\mathbb{i} b)}-\frac{b}{(a-\mathbb{i} b)\ (a+\mathbb{i} b)\ (a\,\text{Cos}[e+f x]+b\,\text{Sin}[e+f x])}\Bigg)\Bigg)\Bigg/$$

$$\left(f\ (a+b\,\text{Tan}[e+f x])^2\right)-\Bigg(4\,\text{AppellF1}\Big[\frac{1}{3},\frac{1}{6},\frac{1}{6},\frac{4}{3},\frac{a-\mathbb{i} b}{a+b\,\text{Tan}[e+f x]},\frac{a+\mathbb{i} b}{a+b\,\text{Tan}[e+f x]}\Big]$$

$$(d\,\text{Sec}[e+f x])^{5/3}\ (a\,\text{Cos}[e+f x]+b\,\text{Sin}[e+f x])^2\Bigg)\Bigg/\Bigg(a\,b\,f\ (a+b\,\text{Tan}[e+f x])$$

$$\Bigg((a+\mathbb{i} b)\ \text{AppellF1}\Big[\frac{4}{3},\frac{1}{6},\frac{7}{6},\frac{7}{3},\frac{a-\mathbb{i} b}{a+b\,\text{Tan}[e+f x]},\frac{a+\mathbb{i} b}{a+b\,\text{Tan}[e+f x]}\Big]+$$

$$(a-\mathbb{i} b)\ \text{AppellF1}\Big[\frac{4}{3},\frac{7}{6},\frac{1}{6},\frac{7}{3},\frac{a-\mathbb{i} b}{a+b\,\text{Tan}[e+f x]},\frac{a+\mathbb{i} b}{a+b\,\text{Tan}[e+f x]}\Big]+$$

$$8\,\text{AppellF1}\Big[\frac{1}{3},\frac{1}{6},\frac{1}{6},\frac{4}{3},\frac{a-\mathbb{i} b}{a+b\,\text{Tan}[e+f x]},\frac{a+\mathbb{i} b}{a+b\,\text{Tan}[e+f x]}\Big]\ (a+b\,\text{Tan}[e+f x])\Bigg)\Bigg)-$$

$$\Bigg(\text{Sec}[e+f x]\ (d\,\text{Sec}[e+f x])^{5/3}\ \Bigg(\frac{6\left(b+a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]\right)}{(a^2+b^2)\ \text{Sec}[e+f x]^{1/3}}+$$

$$\Bigg((-1)^{1/6}\ (-a^2+b^2)\ \text{ArcTan}\Big[\frac{-\sqrt{3}\ (a^2+b^2)^{1/6}+2\ (-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f x]^{1/3}}{(a^2+b^2)^{1/6}}\Big]\ \text{Sec}[e+f x]^{2/3}$$

$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\ \sqrt{\text{Cos}[e+f x]^2\ (-1+\text{Sec}[e+f x]^2)}\right)\Bigg)\Bigg/$$

$$\Bigg(2\,b^{2/3}\ (a^2+b^2)^{7/6}\ \Bigg(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{5/3}+$$

$$b\,\text{Sec}[e+f x]^{2/3}\ (-1+\text{Sec}[e+f x]^2)\Bigg)\Bigg)+$$

$$\Bigg((-1)^{1/6}\ (-a^2+b^2)\ \text{ArcTan}\Big[\frac{\sqrt{3}\ (a^2+b^2)^{1/6}+2\ (-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f x]^{1/3}}{(a^2+b^2)^{1/6}}\Big]\ \text{Sec}[e+f x]^{2/3}$$

$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\ \sqrt{\text{Cos}[e+f x]^2\ (-1+\text{Sec}[e+f x]^2)}\right)\Bigg)\Bigg/$$

$$\Bigg(2\,b^{2/3}\ (a^2+b^2)^{7/6}\ \Bigg(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{5/3}+$$

$$b\,\text{Sec}[e+f x]^{2/3}\ (-1+\text{Sec}[e+f x]^2)\Bigg)\Bigg)+$$

$$\Bigg((-1)^{1/6}\ (-a^2+b^2)\ \text{ArcTan}\Big[\frac{(-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f x]^{1/3}}{(a^2+b^2)^{1/6}}\Big]\ \text{Sec}[e+f x]^{2/3}\ \Bigg(-b+b\,\text{Sec}[e+f x]^2+$$

$$a\,\text{Sec}[e+f x]\ \sqrt{\text{Cos}[e+f x]^2\ (-1+\text{Sec}[e+f x]^2)}\Bigg)\Bigg)\Bigg/\Bigg(b^{2/3}\ (a^2+b^2)^{7/6}$$

$$\left(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{5/3}+b\,\text{Sec}[e+f x]^{2/3}\ (-1+\text{Sec}[e+f x]^2)\right)\Bigg)+$$

$$\Bigg((-1)^{1/6}\sqrt{3}\ (-a^2+b^2)\ \text{Log}\Big[(a^2+b^2)^{1/3}-(-1)^{1/6}\sqrt{3}\ b^{1/3}\ (a^2+b^2)^{1/6}\,\text{Sec}[e+f x]^{1/3}+$$

$$(-1)^{1/3}\,b^{2/3}\,\text{Sec}[e+f x]^{2/3}\Big]\ \text{Sec}[e+f x]^{2/3}\ \Big(-b+b\,\text{Sec}[e+f x]^2+$$

$$a\,\mathrm{Sec}[e+f\,x]\,\sqrt{\mathrm{Cos}[e+f\,x]^2\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)}\,\Big)\Big)\Big/\Big(4\,b^{2/3}\,\left(a^2+b^2\right)^{7/6}$$
$$\Big(a\,\sqrt{1-\mathrm{Cos}[e+f\,x]^2}\,\mathrm{Sec}[e+f\,x]^{5/3}+b\,\mathrm{Sec}[e+f\,x]^{2/3}\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)\Big)\Big)-$$
$$\Big(\left(-1\right)^{1/6}\sqrt{3}\,\left(-a^2+b^2\right)\,\mathrm{Log}\Big[\left(a^2+b^2\right)^{1/3}+\left(-1\right)^{1/6}\sqrt{3}\,b^{1/3}\,\left(a^2+b^2\right)^{1/6}\,\mathrm{Sec}[e+f\,x]^{1/3}+$$
$$\left(-1\right)^{1/3}\,b^{2/3}\,\mathrm{Sec}[e+f\,x]^{2/3}\Big]\,\mathrm{Sec}[e+f\,x]^{2/3}\,\Big(-b+b\,\mathrm{Sec}[e+f\,x]^2+$$
$$a\,\mathrm{Sec}[e+f\,x]\,\sqrt{\mathrm{Cos}[e+f\,x]^2\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)}\,\Big)\Big)\Big/\Big(4\,b^{2/3}\,\left(a^2+b^2\right)^{7/6}$$
$$\Big(a\,\sqrt{1-\mathrm{Cos}[e+f\,x]^2}\,\mathrm{Sec}[e+f\,x]^{5/3}+b\,\mathrm{Sec}[e+f\,x]^{2/3}\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)\Big)\Big)+$$
$$\Big(33\,a^3\,\mathrm{AppellF1}\Big[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\mathrm{Sec}[e+f\,x]^2,\,\frac{b^2\,\mathrm{Sec}[e+f\,x]^2}{a^2+b^2}\Big]\,\mathrm{Sec}[e+f\,x]^{10/3}$$
$$\sqrt{\mathrm{Cos}[e+f\,x]^2\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)}\,\Big(-b+b\,\mathrm{Sec}[e+f\,x]^2+$$
$$a\,\mathrm{Sec}[e+f\,x]\,\sqrt{\mathrm{Cos}[e+f\,x]^2\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)}\,\Big)\Big)\Big/\Big(\left(-1+\mathrm{Sec}[e+f\,x]^2\right)$$
$$\Big(11\,\left(a^2+b^2\right)\,\mathrm{AppellF1}\Big[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\mathrm{Sec}[e+f\,x]^2,\,\frac{b^2\,\mathrm{Sec}[e+f\,x]^2}{a^2+b^2}\Big]+$$
$$3\,\Big(2\,b^2\,\mathrm{AppellF1}\Big[\frac{11}{6},\,\frac{1}{2},\,2,\,\frac{17}{6},\,\mathrm{Sec}[e+f\,x]^2,\,\frac{b^2\,\mathrm{Sec}[e+f\,x]^2}{a^2+b^2}\Big]+$$
$$\left(a^2+b^2\right)\,\mathrm{AppellF1}\Big[\frac{11}{6},\,\frac{3}{2},\,1,\,\frac{17}{6},\,\mathrm{Sec}[e+f\,x]^2,\,\frac{b^2\,\mathrm{Sec}[e+f\,x]^2}{a^2+b^2}\Big]\Big)\,\mathrm{Sec}[e+f\,x]^2\Big)$$
$$\left(-a^2+b^2\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)\right)\,\Big(a\,\sqrt{1-\mathrm{Cos}[e+f\,x]^2}\,\mathrm{Sec}[e+f\,x]^{5/3}+$$
$$b\,\mathrm{Sec}[e+f\,x]^{2/3}\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)\Big)\Big)+$$
$$\Big(99\,a\,b^2\,\mathrm{AppellF1}\Big[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\mathrm{Sec}[e+f\,x]^2,\,\frac{b^2\,\mathrm{Sec}[e+f\,x]^2}{a^2+b^2}\Big]\,\mathrm{Sec}[e+f\,x]^{10/3}$$
$$\sqrt{\mathrm{Cos}[e+f\,x]^2\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)}\,\Big(-b+b\,\mathrm{Sec}[e+f\,x]^2+$$
$$a\,\mathrm{Sec}[e+f\,x]\,\sqrt{\mathrm{Cos}[e+f\,x]^2\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)}\,\Big)\Big)\Big/\Big(5\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)$$
$$\Big(11\,\left(a^2+b^2\right)\,\mathrm{AppellF1}\Big[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\mathrm{Sec}[e+f\,x]^2,\,\frac{b^2\,\mathrm{Sec}[e+f\,x]^2}{a^2+b^2}\Big]+$$
$$3\,\Big(2\,b^2\,\mathrm{AppellF1}\Big[\frac{11}{6},\,\frac{1}{2},\,2,\,\frac{17}{6},\,\mathrm{Sec}[e+f\,x]^2,\,\frac{b^2\,\mathrm{Sec}[e+f\,x]^2}{a^2+b^2}\Big]+$$
$$\left(a^2+b^2\right)\,\mathrm{AppellF1}\Big[\frac{11}{6},\,\frac{3}{2},\,1,\,\frac{17}{6},\,\mathrm{Sec}[e+f\,x]^2,\,\frac{b^2\,\mathrm{Sec}[e+f\,x]^2}{a^2+b^2}\Big]\Big)\,\mathrm{Sec}[e+f\,x]^2\Big)$$
$$\left(-a^2+b^2\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)\right)\,\Big(a\,\sqrt{1-\mathrm{Cos}[e+f\,x]^2}\,\mathrm{Sec}[e+f\,x]^{5/3}+$$
$$b\,\mathrm{Sec}[e+f\,x]^{2/3}\,\left(-1+\mathrm{Sec}[e+f\,x]^2\right)\Big)\Big)-$$
$$\Big(204\,a\,b^2\,\mathrm{AppellF1}\Big[\frac{11}{6},\,\frac{1}{2},\,1,\,\frac{17}{6},\,\mathrm{Sec}[e+f\,x]^2,\,\frac{b^2\,\mathrm{Sec}[e+f\,x]^2}{a^2+b^2}\Big]\,\mathrm{Sec}[e+f\,x]^{16/3}$$

$$\sqrt{\mathrm{Cos}[e+f x]^2 \left(-1+\mathrm{Sec}[e+f x]^2\right)} \left(-b+b\,\mathrm{Sec}[e+f x]^2+\right.$$
$$\left.\left.\left. a\,\mathrm{Sec}[e+f x] \sqrt{\mathrm{Cos}[e+f x]^2 \left(-1+\mathrm{Sec}[e+f x]^2\right)}\right)\right) \Big/ \left(11 \left(-1+\mathrm{Sec}[e+f x]^2\right)\right.$$
$$\left(17 \left(a^2+b^2\right) \mathrm{AppellF1}\left[\frac{11}{6}, \frac{1}{2}, 1, \frac{17}{6}, \mathrm{Sec}[e+f x]^2, \frac{b^2\,\mathrm{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$
$$3 \left(2 b^2\,\mathrm{AppellF1}\left[\frac{17}{6}, \frac{1}{2}, 2, \frac{23}{6}, \mathrm{Sec}[e+f x]^2, \frac{b^2\,\mathrm{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$
$$\left.\left.\left(a^2+b^2\right) \mathrm{AppellF1}\left[\frac{17}{6}, \frac{3}{2}, 1, \frac{23}{6}, \mathrm{Sec}[e+f x]^2, \frac{b^2\,\mathrm{Sec}[e+f x]^2}{a^2+b^2}\right]\right) \mathrm{Sec}[e+f x]^2\right)$$
$$\left(-a^2+b^2 \left(-1+\mathrm{Sec}[e+f x]^2\right)\right) \left(a \sqrt{1-\mathrm{Cos}[e+f x]^2}\ \mathrm{Sec}[e+f x]^{5/3}+\right.$$
$$\left.\left.\left. b\,\mathrm{Sec}[e+f x]^{2/3} \left(-1+\mathrm{Sec}[e+f x]^2\right)\right)\right)\right)$$
$$\left(\mathrm{Cos}[e+f x]-\mathrm{Sin}[e+f x]\right) \left(\mathrm{Cos}[e+f x]+\mathrm{Sin}[e+f x]\right)$$
$$\left.\left(a\,\mathrm{Cos}[e+f x]+b\,\mathrm{Sin}[e+f x]\right)\right) \Big/ \left(6\right.$$

a
f
$$\left(a+b\,\mathrm{Tan}[e+f x]\right)^2$$
$$\left(-\frac{1}{a^2+b^2} 2\,\mathrm{Sec}[e+f x]^{2/3} \left(b+a \sqrt{1-\mathrm{Cos}[e+f x]^2}\ \mathrm{Sec}[e+f x]\right) \mathrm{Sin}[e+f x]+\right.$$
$$\left(\left(-1\right)^{1/6} \left(-a^2+b^2\right) \mathrm{ArcTan}\left[\frac{-\sqrt{3}\ \left(a^2+b^2\right)^{1/6}+2 \left(-1\right)^{1/6} b^{1/3}\,\mathrm{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right] \mathrm{Sec}[e+f x]^{5/3}\right.$$
$$\left(-b+b\,\mathrm{Sec}[e+f x]^2+a\,\mathrm{Sec}[e+f x] \sqrt{\mathrm{Cos}[e+f x]^2 \left(-1+\mathrm{Sec}[e+f x]^2\right)}\right)$$
$$\left.\mathrm{Sin}[e+f x]\right) \Big/ \left(3 b^{2/3} \left(a^2+b^2\right)^{7/6}\right.$$
$$\left.\left(a \sqrt{1-\mathrm{Cos}[e+f x]^2}\ \mathrm{Sec}[e+f x]^{5/3}+b\,\mathrm{Sec}[e+f x]^{2/3} \left(-1+\mathrm{Sec}[e+f x]^2\right)\right)\right)+$$
$$\left(\left(-1\right)^{1/6} \left(-a^2+b^2\right) \mathrm{ArcTan}\left[\frac{\sqrt{3}\ \left(a^2+b^2\right)^{1/6}+2 \left(-1\right)^{1/6} b^{1/3}\,\mathrm{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]\right.$$
$$\mathrm{Sec}[e+f x]^{5/3} \left(-b+b\,\mathrm{Sec}[e+f x]^2+a\,\mathrm{Sec}[e+f x] \sqrt{\mathrm{Cos}[e+f x]^2 \left(-1+\mathrm{Sec}[e+f x]^2\right)}\right)$$
$$\left.\mathrm{Sin}[e+f x]\right) \Big/ \left(3 b^{2/3} \left(a^2+b^2\right)^{7/6}\right.$$
$$\left.\left(a \sqrt{1-\mathrm{Cos}[e+f x]^2}\ \mathrm{Sec}[e+f x]^{5/3}+b\,\mathrm{Sec}[e+f x]^{2/3} \left(-1+\mathrm{Sec}[e+f x]^2\right)\right)\right)+$$

$$\left(2\,(-1)^{1/6}\,\left(-a^2+b^2\right)\,\text{ArcTan}\left[\frac{(-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f\,x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]\,\text{Sec}[e+f\,x]^{5/3}\right.$$
$$\left(-b+b\,\text{Sec}[e+f\,x]^2+a\,\text{Sec}[e+f\,x]\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)$$
$$\left.\text{Sin}[e+f\,x]\right)\Big/\left(3\,b^{2/3}\,\left(a^2+b^2\right)^{7/6}\right.$$
$$\left.\left(a\,\sqrt{1-\text{Cos}[e+f\,x]^2}\,\text{Sec}[e+f\,x]^{5/3}+b\,\text{Sec}[e+f\,x]^{2/3}\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)+$$
$$\left((-1)^{1/6}\,\left(-a^2+b^2\right)\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}-(-1)^{1/6}\,\sqrt{3}\,b^{1/3}\,\left(a^2+b^2\right)^{1/6}\,\text{Sec}[e+f\,x]^{1/3}+\right.\right.$$
$$\left.(-1)^{1/3}\,b^{2/3}\,\text{Sec}[e+f\,x]^{2/3}\right]\,\text{Sec}[e+f\,x]^{5/3}$$
$$\left(-b+b\,\text{Sec}[e+f\,x]^2+a\,\text{Sec}[e+f\,x]\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)$$
$$\left.\text{Sin}[e+f\,x]\right)\Big/\left(2\,\sqrt{3}\,b^{2/3}\,\left(a^2+b^2\right)^{7/6}\right.$$
$$\left.\left(a\,\sqrt{1-\text{Cos}[e+f\,x]^2}\,\text{Sec}[e+f\,x]^{5/3}+b\,\text{Sec}[e+f\,x]^{2/3}\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)-$$
$$\left((-1)^{1/6}\,\left(-a^2+b^2\right)\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}+(-1)^{1/6}\,\sqrt{3}\,b^{1/3}\,\left(a^2+b^2\right)^{1/6}\,\text{Sec}[e+f\,x]^{1/3}+\right.\right.$$
$$\left.(-1)^{1/3}\,b^{2/3}\,\text{Sec}[e+f\,x]^{2/3}\right]\,\text{Sec}[e+f\,x]^{5/3}$$
$$\left(-b+b\,\text{Sec}[e+f\,x]^2+a\,\text{Sec}[e+f\,x]\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)$$
$$\left.\text{Sin}[e+f\,x]\right)\Big/\left(2\,\sqrt{3}\,b^{2/3}\,\left(a^2+b^2\right)^{7/6}\right.$$
$$\left.\left(a\,\sqrt{1-\text{Cos}[e+f\,x]^2}\,\text{Sec}[e+f\,x]^{5/3}+b\,\text{Sec}[e+f\,x]^{2/3}\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)-$$
$$\left(66\,a^3\,b^2\,\text{AppellF1}\left[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right.$$
$$\text{Sec}[e+f\,x]^{19/3}\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}$$
$$\left(-b+b\,\text{Sec}[e+f\,x]^2+a\,\text{Sec}[e+f\,x]\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)$$
$$\left.\text{Sin}[e+f\,x]\right)\Big/\left(\left(-1+\text{Sec}[e+f\,x]^2\right)\right.$$
$$\left(11\,\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$
$$3\,\left(2\,b^2\,\text{AppellF1}\left[\frac{11}{6},\,\frac{1}{2},\,2,\,\frac{17}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$
$$\left.\left.\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{11}{6},\,\frac{3}{2},\,1,\,\frac{17}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right)\,\text{Sec}[e+f\,x]^2\right)$$
$$\left(-a^2+b^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)^2\,\left(a\,\sqrt{1-\text{Cos}[e+f\,x]^2}\,\text{Sec}[e+f\,x]^{5/3}+\right.$$
$$\left.\left.b\,\text{Sec}[e+f\,x]^{2/3}\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)-$$
$$\left(198\,a\,b^4\,\text{AppellF1}\left[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right.$$
$$\text{Sec}[e+f\,x]^{19/3}\,\sqrt{\text{Cos}[e+f\,x]^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)}$$

$$\left(-b + b\,\text{Sec}[e+f x]^2 + a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$
$$\text{Sin}[e+f x]\Bigg) \Big/ \Bigg(5\,\left(-1+\text{Sec}[e+f x]^2\right)$$
$$\left(11\,\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$
$$3\,\left(2\,b^2\,\text{AppellF1}\left[\frac{11}{6},\,\frac{1}{2},\,2,\,\frac{17}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$
$$\left.\left.\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{11}{6},\,\frac{3}{2},\,1,\,\frac{17}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right)\,\text{Sec}[e+f x]^2\right)$$
$$\left(-a^2+b^2\,\left(-1+\text{Sec}[e+f x]^2\right)\right)^2\,\left(a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+\right.$$
$$\left.\left.b\,\text{Sec}[e+f x]^{2/3}\,\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)+$$
$$\left(408\,a\,b^4\,\text{AppellF1}\left[\frac{11}{6},\,\frac{1}{2},\,1,\,\frac{17}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right.$$
$$\text{Sec}[e+f x]^{25/3}\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}$$
$$\left(-b + b\,\text{Sec}[e+f x]^2 + a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$
$$\text{Sin}[e+f x]\Bigg) \Big/ \Bigg(11\,\left(-1+\text{Sec}[e+f x]^2\right)$$
$$\left(17\,\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{11}{6},\,\frac{1}{2},\,1,\,\frac{17}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$
$$3\,\left(2\,b^2\,\text{AppellF1}\left[\frac{17}{6},\,\frac{1}{2},\,2,\,\frac{23}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$
$$\left.\left.\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{17}{6},\,\frac{3}{2},\,1,\,\frac{23}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right)\,\text{Sec}[e+f x]^2\right)$$
$$\left(-a^2+b^2\,\left(-1+\text{Sec}[e+f x]^2\right)\right)^2\,\left(a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+\right.$$
$$\left.\left.b\,\text{Sec}[e+f x]^{2/3}\,\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)-$$
$$\left(66\,a^3\,\text{AppellF1}\left[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\,\text{Sec}[e+f x]^{19/3}\right.$$
$$\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}$$
$$\left(-b + b\,\text{Sec}[e+f x]^2 + a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$
$$\text{Sin}[e+f x]\Bigg) \Big/ \Bigg(\left(-1+\text{Sec}[e+f x]^2\right)^2$$
$$\left(11\,\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$
$$3\,\left(2\,b^2\,\text{AppellF1}\left[\frac{11}{6},\,\frac{1}{2},\,2,\,\frac{17}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$
$$\left.\left.\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{11}{6},\,\frac{3}{2},\,1,\,\frac{17}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right)\,\text{Sec}[e+f x]^2\right)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{5/3}+\right.$$
$$\left.\left.b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)-$$
$$\left(198\,a\,b^2\,\text{AppellF1}\left[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right.$$
$$\text{Sec}[e+f x]^{19/3}\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}$$
$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$
$$\left.\text{Sin}[e+f x]\right)\Big/\left(5\left(-1+\text{Sec}[e+f x]^2\right)^2\right.$$
$$\left(11\left(a^2+b^2\right)\text{AppellF1}\left[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$
$$3\left(2\,b^2\,\text{AppellF1}\left[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$
$$\left.\left.\left(a^2+b^2\right)\text{AppellF1}\left[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right)\text{Sec}[e+f x]^2\right)$$
$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{5/3}+\right.$$
$$\left.\left.b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)+$$
$$\left(110\,a^3\,\text{AppellF1}\left[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right.$$
$$\text{Sec}[e+f x]^{13/3}\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}$$
$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$
$$\left.\text{Sin}[e+f x]\right)\Big/\left(\left(-1+\text{Sec}[e+f x]^2\right)\right.$$
$$\left(11\left(a^2+b^2\right)\text{AppellF1}\left[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$
$$3\left(2\,b^2\,\text{AppellF1}\left[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$
$$\left.\left.\left(a^2+b^2\right)\text{AppellF1}\left[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right)\text{Sec}[e+f x]^2\right)$$
$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{5/3}+\right.$$
$$\left.\left.b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)+$$
$$\left(66\,a\,b^2\,\text{AppellF1}\left[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right.$$
$$\text{Sec}[e+f x]^{13/3}\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}$$
$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\text{Sin}[e+f x]\Big) \Big/ \Big(\left(-1+\text{Sec}[e+f x]^2\right)$$

$$\Big(11\left(a^2+b^2\right)\text{AppellF1}\left[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+$$

$$3\Big(2\,b^2\,\text{AppellF1}\left[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+$$

$$\left(a^2+b^2\right)\text{AppellF1}\left[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\Big)\,\text{Sec}[e+f x]^2\Big)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Big(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+$$

$$b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\Big)\Big)+$$

$$\Big(408\,a\,b^2\,\text{AppellF1}\left[\frac{11}{6},\frac{1}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]$$

$$\text{Sec}[e+f x]^{25/3}\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}$$

$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\text{Sin}[e+f x]\Big) \Big/ \Big(11\left(-1+\text{Sec}[e+f x]^2\right)^2$$

$$\Big(17\left(a^2+b^2\right)\text{AppellF1}\left[\frac{11}{6},\frac{1}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+$$

$$3\Big(2\,b^2\,\text{AppellF1}\left[\frac{17}{6},\frac{1}{2},2,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+$$

$$\left(a^2+b^2\right)\text{AppellF1}\left[\frac{17}{6},\frac{3}{2},1,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\Big)\,\text{Sec}[e+f x]^2\Big)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Big(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+$$

$$b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\Big)\Big)-$$

$$\Big(1088\,a\,b^2\,\text{AppellF1}\left[\frac{11}{6},\frac{1}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]$$

$$\text{Sec}[e+f x]^{19/3}\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}$$

$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\text{Sin}[e+f x]\Big) \Big/ \Big(11\left(-1+\text{Sec}[e+f x]^2\right)$$

$$\Big(17\left(a^2+b^2\right)\text{AppellF1}\left[\frac{11}{6},\frac{1}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+$$

$$3\Big(2\,b^2\,\text{AppellF1}\left[\frac{17}{6},\frac{1}{2},2,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+$$

$$\left(a^2+b^2\right)\text{AppellF1}\left[\frac{17}{6},\frac{3}{2},1,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\Big)\,\text{Sec}[e+f x]^2\Big)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Big(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+$$

$$b\,\mathrm{Sec}[e+f x]^{2/3}\left(-1+\mathrm{Sec}[e+f x]^2\right)\Big)\Big)+\Bigg(\left((-1)^{1/6}\sqrt{3}\left(-a^2+b^2\right)\mathrm{Sec}[e+f x]^{2/3}\right.$$

$$\left(-b+b\,\mathrm{Sec}[e+f x]^2+a\,\mathrm{Sec}[e+f x]\sqrt{\mathrm{Cos}[e+f x]^2\left(-1+\mathrm{Sec}[e+f x]^2\right)}\right)$$

$$\left(-\frac{(-1)^{1/6}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\mathrm{Sec}[e+f x]^{4/3}\,\mathrm{Sin}[e+f x]}{\sqrt{3}}+\right.$$

$$\left.\left.\frac{2}{3}(-1)^{1/3}\,b^{2/3}\,\mathrm{Sec}[e+f x]^{5/3}\,\mathrm{Sin}[e+f x]\right)\right)\Big/\left(4\,b^{2/3}\left(a^2+b^2\right)^{7/6}\right.$$

$$\left(\left(a^2+b^2\right)^{1/3}-(-1)^{1/6}\sqrt{3}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\mathrm{Sec}[e+f x]^{1/3}+(-1)^{1/3}\,b^{2/3}\,\mathrm{Sec}[e+f x]^{2/3}\right)$$

$$\left.\left(a\sqrt{1-\mathrm{Cos}[e+f x]^2}\,\mathrm{Sec}[e+f x]^{5/3}+b\,\mathrm{Sec}[e+f x]^{2/3}\left(-1+\mathrm{Sec}[e+f x]^2\right)\right)\right)-$$

$$\Bigg(\left((-1)^{1/6}\sqrt{3}\left(-a^2+b^2\right)\mathrm{Sec}[e+f x]^{2/3}\right.\left(-b+b\,\mathrm{Sec}[e+f x]^2+\right.$$

$$\left.a\,\mathrm{Sec}[e+f x]\sqrt{\mathrm{Cos}[e+f x]^2\left(-1+\mathrm{Sec}[e+f x]^2\right)}\right)$$

$$\left(\frac{(-1)^{1/6}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\mathrm{Sec}[e+f x]^{4/3}\,\mathrm{Sin}[e+f x]}{\sqrt{3}}+\right.$$

$$\left.\left.\frac{2}{3}(-1)^{1/3}\,b^{2/3}\,\mathrm{Sec}[e+f x]^{5/3}\,\mathrm{Sin}[e+f x]\right)\right)\Big/\left(4\,b^{2/3}\left(a^2+b^2\right)^{7/6}\right.$$

$$\left(\left(a^2+b^2\right)^{1/3}+(-1)^{1/6}\sqrt{3}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\mathrm{Sec}[e+f x]^{1/3}+(-1)^{1/3}\,b^{2/3}\,\mathrm{Sec}[e+f x]^{2/3}\right)$$

$$\left.\left(a\sqrt{1-\mathrm{Cos}[e+f x]^2}\,\mathrm{Sec}[e+f x]^{5/3}+b\,\mathrm{Sec}[e+f x]^{2/3}\left(-1+\mathrm{Sec}[e+f x]^2\right)\right)\right)-$$

$$\Bigg((-1)^{1/6}\left(-a^2+b^2\right)\mathrm{ArcTan}\Big[\frac{-\sqrt{3}\left(a^2+b^2\right)^{1/6}+2\,(-1)^{1/6}\,b^{1/3}\,\mathrm{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\Big]$$

$$\mathrm{Sec}[e+f x]^{2/3}\left(-b+b\,\mathrm{Sec}[e+f x]^2+a\,\mathrm{Sec}[e+f x]\sqrt{\mathrm{Cos}[e+f x]^2\left(-1+\mathrm{Sec}[e+f x]^2\right)}\right)$$

$$\left(\frac{a\,\mathrm{Sec}[e+f x]^{2/3}\,\mathrm{Sin}[e+f x]}{\sqrt{1-\mathrm{Cos}[e+f x]^2}}+\frac{5}{3}a\sqrt{1-\mathrm{Cos}[e+f x]^2}\,\mathrm{Sec}[e+f x]^{8/3}\,\mathrm{Sin}[e+f x]+\right.$$

$$2\,b\,\mathrm{Sec}[e+f x]^{11/3}\,\mathrm{Sin}[e+f x]+$$

$$\left.\left.\frac{2}{3}b\,\mathrm{Sec}[e+f x]^{5/3}\left(-1+\mathrm{Sec}[e+f x]^2\right)\mathrm{Sin}[e+f x]\right)\right)\Big/\left(2\,b^{2/3}\left(a^2+b^2\right)^{7/6}\right.$$

$$\left.\left(a\sqrt{1-\mathrm{Cos}[e+f x]^2}\,\mathrm{Sec}[e+f x]^{5/3}+b\,\mathrm{Sec}[e+f x]^{2/3}\left(-1+\mathrm{Sec}[e+f x]^2\right)\right)^2\right)-$$

$$\Bigg((-1)^{1/6}\left(-a^2+b^2\right)\mathrm{ArcTan}\Big[\frac{\sqrt{3}\left(a^2+b^2\right)^{1/6}+2\,(-1)^{1/6}\,b^{1/3}\,\mathrm{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\Big]$$

$$\mathrm{Sec}[e+f x]^{2/3}\left(-b+b\,\mathrm{Sec}[e+f x]^2+a\,\mathrm{Sec}[e+f x]\sqrt{\mathrm{Cos}[e+f x]^2\left(-1+\mathrm{Sec}[e+f x]^2\right)}\right)$$

$$\left(\frac{a\,\text{Sec}[e+f x]^{2/3}\,\text{Sin}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+\frac{5}{3}\,a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{8/3}\,\text{Sin}[e+f x]+2\,b\,\text{Sec}[e+f x]^{11/3}\,\text{Sin}[e+f x]+\frac{2}{3}\,b\,\text{Sec}[e+f x]^{5/3}\left(-1+\text{Sec}[e+f x]^2\right)\text{Sin}[e+f x]\right)\Bigg)\Bigg/\left(2\,b^{2/3}\left(a^2+b^2\right)^{7/6}\left(a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)^2\right)-$$

$$\Bigg((-1)^{1/6}\left(-a^2+b^2\right)\text{ArcTan}\left[\frac{(-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]\text{Sec}[e+f x]^{2/3}\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left(\frac{a\,\text{Sec}[e+f x]^{2/3}\,\text{Sin}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+\frac{5}{3}\,a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{8/3}\,\text{Sin}[e+f x]+2\,b\,\text{Sec}[e+f x]^{11/3}\,\text{Sin}[e+f x]+\frac{2}{3}\,b\,\text{Sec}[e+f x]^{5/3}\left(-1+\text{Sec}[e+f x]^2\right)\text{Sin}[e+f x]\right)\Bigg)\Bigg/\left(b^{2/3}\left(a^2+b^2\right)^{7/6}\left(a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)^2\right)-$$

$$\Bigg((-1)^{1/6}\sqrt{3}\left(-a^2+b^2\right)\text{Log}\left[\left(a^2+b^2\right)^{1/3}-(-1)^{1/6}\sqrt{3}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\text{Sec}[e+f x]^{1/3}+(-1)^{1/3}\,b^{2/3}\,\text{Sec}[e+f x]^{2/3}\right]\text{Sec}[e+f x]^{2/3}\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left(\frac{a\,\text{Sec}[e+f x]^{2/3}\,\text{Sin}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+\frac{5}{3}\,a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{8/3}\,\text{Sin}[e+f x]+2\,b\,\text{Sec}[e+f x]^{11/3}\,\text{Sin}[e+f x]+\frac{2}{3}\,b\,\text{Sec}[e+f x]^{5/3}\left(-1+\text{Sec}[e+f x]^2\right)\text{Sin}[e+f x]\right)\Bigg)\Bigg/\left(4\,b^{2/3}\left(a^2+b^2\right)^{7/6}\left(a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)^2\right)+$$

$$\Bigg((-1)^{1/6}\sqrt{3}\left(-a^2+b^2\right)\text{Log}\left[\left(a^2+b^2\right)^{1/3}+(-1)^{1/6}\sqrt{3}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\text{Sec}[e+f x]^{1/3}+(-1)^{1/3}\,b^{2/3}\,\text{Sec}[e+f x]^{2/3}\right]\text{Sec}[e+f x]^{2/3}\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left(\frac{a\,\text{Sec}[e+f x]^{2/3}\,\text{Sin}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+\frac{5}{3}\,a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{8/3}\,\text{Sin}[e+f x]+\right.$$
$$2\,b\,\text{Sec}[e+f x]^{11/3}\,\text{Sin}[e+f x]+$$
$$\left.\left.\frac{2}{3}\,b\,\text{Sec}[e+f x]^{5/3}\,\left(-1+\text{Sec}[e+f x]^2\right)\,\text{Sin}[e+f x]\right)\right)\Big/\left(4\,b^{2/3}\,\left(a^2+b^2\right)^{7/6}\right.$$
$$\left.\left(a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+b\,\text{Sec}[e+f x]^{2/3}\,\left(-1+\text{Sec}[e+f x]^2\right)\right)^2\right)-$$
$$\left(33\,a^3\,\text{AppellF1}\left[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right.$$
$$\text{Sec}[e+f x]^{10/3}\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}$$
$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$
$$\left(\frac{a\,\text{Sec}[e+f x]^{2/3}\,\text{Sin}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+\frac{5}{3}\,a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{8/3}\,\text{Sin}[e+f x]+2\,b\right.$$
$$\left.\left.\text{Sec}[e+f x]^{11/3}\,\text{Sin}[e+f x]+\frac{2}{3}\,b\,\text{Sec}[e+f x]^{5/3}\,\left(-1+\text{Sec}[e+f x]^2\right)\,\text{Sin}[e+f x]\right)\right)\Big/$$
$$\left(\left(-1+\text{Sec}[e+f x]^2\right)\,\left(11\,\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\text{Sec}[e+f x]^2,\right.\right.\right.$$
$$\left.\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+3\,\left(2\,b^2\,\text{AppellF1}\left[\frac{11}{6},\,\frac{1}{2},\,2,\,\frac{17}{6},\,\text{Sec}[e+f x]^2,\right.\right.$$
$$\left.\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{11}{6},\,\frac{3}{2},\,1,\,\frac{17}{6},\,\text{Sec}[e+f x]^2,\right.$$
$$\left.\left.\left.\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right)\,\text{Sec}[e+f x]^2\right)\,\left(-a^2+b^2\,\left(-1+\text{Sec}[e+f x]^2\right)\right)$$
$$\left.\left(a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+b\,\text{Sec}[e+f x]^{2/3}\,\left(-1+\text{Sec}[e+f x]^2\right)\right)^2\right)-$$
$$\left(99\,a\,b^2\,\text{AppellF1}\left[\frac{5}{6},\,\frac{1}{2},\,1,\,\frac{11}{6},\,\text{Sec}[e+f x]^2,\,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right.$$
$$\text{Sec}[e+f x]^{10/3}\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}$$
$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\,\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$
$$\left(\frac{a\,\text{Sec}[e+f x]^{2/3}\,\text{Sin}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}}+\frac{5}{3}\,a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{8/3}\,\text{Sin}[e+f x]+2\,b\right.$$
$$\left.\left.\text{Sec}[e+f x]^{11/3}\,\text{Sin}[e+f x]+\frac{2}{3}\,b\,\text{Sec}[e+f x]^{5/3}\,\left(-1+\text{Sec}[e+f x]^2\right)\,\text{Sin}[e+f x]\right)\right)\Big/$$

$$\left(5\left(-1+\operatorname{Sec}[e+fx]^2\right)\left(11\left(a^2+b^2\right)\operatorname{AppellF1}\left[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]+3\left(2b^2\operatorname{AppellF1}\left[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\operatorname{AppellF1}\left[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\operatorname{Sec}[e+fx]^2\right)\left(-a^2+b^2\left(-1+\operatorname{Sec}[e+fx]^2\right)\right)\left(a\sqrt{1-\operatorname{Cos}[e+fx]^2}\operatorname{Sec}[e+fx]^{5/3}+b\operatorname{Sec}[e+fx]^{2/3}\left(-1+\operatorname{Sec}[e+fx]^2\right)\right)^2\right)+$$

$$\left(204ab^2\operatorname{AppellF1}\left[\frac{11}{6},\frac{1}{2},1,\frac{17}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]\operatorname{Sec}[e+fx]^{16/3}\sqrt{\operatorname{Cos}[e+fx]^2\left(-1+\operatorname{Sec}[e+fx]^2\right)}\left(-b+b\operatorname{Sec}[e+fx]^2+a\operatorname{Sec}[e+fx]\sqrt{\operatorname{Cos}[e+fx]^2\left(-1+\operatorname{Sec}[e+fx]^2\right)}\right)\left(\frac{a\operatorname{Sec}[e+fx]^{2/3}\operatorname{Sin}[e+fx]}{\sqrt{1-\operatorname{Cos}[e+fx]^2}}+\frac{5}{3}a\sqrt{1-\operatorname{Cos}[e+fx]^2}\operatorname{Sec}[e+fx]^{8/3}\operatorname{Sin}[e+fx]+2b\operatorname{Sec}[e+fx]^{11/3}\operatorname{Sin}[e+fx]+\frac{2}{3}b\operatorname{Sec}[e+fx]^{5/3}\left(-1+\operatorname{Sec}[e+fx]^2\right)\operatorname{Sin}[e+fx]\right)\right)\Big/$$

$$\left(11\left(-1+\operatorname{Sec}[e+fx]^2\right)\left(17\left(a^2+b^2\right)\operatorname{AppellF1}\left[\frac{11}{6},\frac{1}{2},1,\frac{17}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]+3\left(2b^2\operatorname{AppellF1}\left[\frac{17}{6},\frac{1}{2},2,\frac{23}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\operatorname{AppellF1}\left[\frac{17}{6},\frac{3}{2},1,\frac{23}{6},\operatorname{Sec}[e+fx]^2,\frac{b^2\operatorname{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\operatorname{Sec}[e+fx]^2\right)\left(-a^2+b^2\left(-1+\operatorname{Sec}[e+fx]^2\right)\right)\left(a\sqrt{1-\operatorname{Cos}[e+fx]^2}\operatorname{Sec}[e+fx]^{5/3}+b\operatorname{Sec}[e+fx]^{2/3}\left(-1+\operatorname{Sec}[e+fx]^2\right)\right)^2\right)+$$

$$\left((-1)^{1/3}\left(-a^2+b^2\right)\operatorname{Sec}[e+fx]\left(-b+b\operatorname{Sec}[e+fx]^2+a\operatorname{Sec}[e+fx]\sqrt{\operatorname{Cos}[e+fx]^2\left(-1+\operatorname{Sec}[e+fx]^2\right)}\right)\operatorname{Tan}[e+fx]\right)\Big/$$

$$\left(3b^{1/3}\left(a^2+b^2\right)^{4/3}\left(1+\frac{\left(-\sqrt{3}\left(a^2+b^2\right)^{1/6}+2(-1)^{1/6}b^{1/3}\operatorname{Sec}[e+fx]^{1/3}\right)^2}{\left(a^2+b^2\right)^{1/3}}\right)\left(a\sqrt{1-\operatorname{Cos}[e+fx]^2}\operatorname{Sec}[e+fx]^{5/3}+b\operatorname{Sec}[e+fx]^{2/3}\left(-1+\operatorname{Sec}[e+fx]^2\right)\right)\right)+$$

$$\left((-1)^{1/3}\left(-a^2+b^2\right)\operatorname{Sec}[e+fx]\left(-b+b\operatorname{Sec}[e+fx]^2+\right.\right.$$

$$a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\Big)\,\text{Tan}[e+f x]\Big)\Big/$$

$$\left(3\,b^{1/3}\left(a^2+b^2\right)^{4/3}\left(1+\frac{\left(\sqrt{3}\left(a^2+b^2\right)^{1/6}+2\,(-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f x]^{1/3}\right)^2}{\left(a^2+b^2\right)^{1/3}}\right)\right.$$

$$\left.\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)+$$

$$\Big(\left(-1\right)^{1/3}\left(-a^2+b^2\right)\text{Sec}[e+f x]\,\Big(-b+b\,\text{Sec}[e+f x]^2+$$

$$a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\Big)\,\text{Tan}[e+f x]\Big)\Big/$$

$$\left(3\,b^{1/3}\left(a^2+b^2\right)^{4/3}\left(1+\frac{(-1)^{1/3}\,b^{2/3}\,\text{Sec}[e+f x]^{2/3}}{\left(a^2+b^2\right)^{1/3}}\right)\right.$$

$$\left.\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)+$$

$$\Big(33\,a^3\,\text{AppellF1}\Big[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^{10/3}$$

$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left(-2\,\text{Cos}[e+f x]\left(-1+\text{Sec}[e+f x]^2\right)\text{Sin}[e+f x]+2\,\text{Tan}[e+f x]\right)\Big)\Big/$$

$$\Big(2\left(-1+\text{Sec}[e+f x]^2\right)\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}$$

$$\Big(11\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\,\Big(2\,b^2\,\text{AppellF1}\Big[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Big)\,\text{Sec}[e+f x]^2\Big)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Big(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+$$

$$b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\Big)\Big)+$$

$$\Big(99\,a\,b^2\,\text{AppellF1}\Big[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^{10/3}$$

$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left(-2\,\text{Cos}[e+f x]\left(-1+\text{Sec}[e+f x]^2\right)\text{Sin}[e+f x]+2\,\text{Tan}[e+f x]\right)\Big)\Big/$$

$$\Big(10\left(-1+\text{Sec}[e+f x]^2\right)\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}$$

$$\Big(11\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\left(2\,b^2\,\text{AppellF1}\left[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$
$$\left.\left(a^2+b^2\right)\text{AppellF1}\left[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right)\text{Sec}[e+f\,x]^2\Bigg)$$
$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f\,x]^2}\;\text{Sec}[e+f\,x]^{5/3}+\right.$$
$$\left.b\,\text{Sec}[e+f\,x]^{2/3}\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\Bigg)-$$
$$\left(102\,a\,b^2\,\text{AppellF1}\left[\frac{11}{6},\frac{1}{2},1,\frac{17}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\text{Sec}[e+f\,x]^{16/3}\right.$$
$$\left(-b+b\,\text{Sec}[e+f\,x]^2+a\,\text{Sec}[e+f\,x]\sqrt{\text{Cos}[e+f\,x]^2\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)$$
$$\left.\left(-2\,\text{Cos}[e+f\,x]\left(-1+\text{Sec}[e+f\,x]^2\right)\text{Sin}[e+f\,x]+2\,\text{Tan}[e+f\,x]\right)\right)\Big/$$
$$\left(11\left(-1+\text{Sec}[e+f\,x]^2\right)\sqrt{\text{Cos}[e+f\,x]^2\left(-1+\text{Sec}[e+f\,x]^2\right)}\right.$$
$$\left(17\left(a^2+b^2\right)\text{AppellF1}\left[\frac{11}{6},\frac{1}{2},1,\frac{17}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$
$$3\left(2\,b^2\,\text{AppellF1}\left[\frac{17}{6},\frac{1}{2},2,\frac{23}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$
$$\left.\left(a^2+b^2\right)\text{AppellF1}\left[\frac{17}{6},\frac{3}{2},1,\frac{23}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right)\text{Sec}[e+f\,x]^2\Bigg)$$
$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f\,x]^2}\;\text{Sec}[e+f\,x]^{5/3}+\right.$$
$$\left.b\,\text{Sec}[e+f\,x]^{2/3}\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\Bigg)+$$
$$\left(6\left(\frac{a\,\text{Sin}[e+f\,x]}{\sqrt{1-\text{Cos}[e+f\,x]^2}}+a\sqrt{1-\text{Cos}[e+f\,x]^2}\;\text{Sec}[e+f\,x]\;\text{Tan}[e+f\,x]\right)\right)\Big/$$
$$\left(\left(a^2+b^2\right)\text{Sec}[e+f\,x]^{1/3}\right)+$$
$$\left(33\,a^3\,\text{Sec}[e+f\,x]^{10/3}\sqrt{\text{Cos}[e+f\,x]^2\left(-1+\text{Sec}[e+f\,x]^2\right)}\right.$$
$$\left(-b+b\,\text{Sec}[e+f\,x]^2+a\,\text{Sec}[e+f\,x]\sqrt{\text{Cos}[e+f\,x]^2\left(-1+\text{Sec}[e+f\,x]^2\right)}\right)$$
$$\left(\frac{1}{11\left(a^2+b^2\right)}10\,b^2\,\text{AppellF1}\left[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\text{Sec}[e+f\,x]^2\right.$$
$$\text{Tan}[e+f\,x]+\frac{5}{11}\,\text{AppellF1}\left[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]$$
$$\left.\left.\text{Sec}[e+f\,x]^2\,\text{Tan}[e+f\,x]\right)\right)\Big/\left(\left(-1+\text{Sec}[e+f\,x]^2\right)\right.$$
$$\left(11\left(a^2+b^2\right)\text{AppellF1}\left[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$
$$3\left(2\,b^2\,\text{AppellF1}\left[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$

$$\left(a^2+b^2\right) \text{AppellF1}\left[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]\right) \text{Sec}[e+f x]^2\right)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{5/3}+\right.$$

$$\left.\left.b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)+$$

$$\left(99\, a\, b^2 \text{Sec}[e+f x]^{10/3}\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right.$$

$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left(\frac{1}{11\left(a^2+b^2\right)}10\, b^2 \text{AppellF1}\left[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^2\right.$$

$$\text{Tan}[e+f x]+\frac{5}{11} \text{AppellF1}\left[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]$$

$$\left.\left.\text{Sec}[e+f x]^2 \text{Tan}[e+f x]\right)\right)\Big/\left(5\left(-1+\text{Sec}[e+f x]^2\right)\right.$$

$$\left(11\left(a^2+b^2\right) \text{AppellF1}\left[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$

$$3\left(2\, b^2 \text{AppellF1}\left[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$

$$\left.\left.\left(a^2+b^2\right) \text{AppellF1}\left[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]\right) \text{Sec}[e+f x]^2\right)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{5/3}+\right.$$

$$\left.\left.b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)-$$

$$\left(204\, a\, b^2 \text{Sec}[e+f x]^{16/3}\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right.$$

$$\left(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\left(\frac{1}{17\left(a^2+b^2\right)}22\, b^2 \text{AppellF1}\left[\frac{17}{6},\frac{1}{2},2,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^2\right.$$

$$\text{Tan}[e+f x]+\frac{11}{17} \text{AppellF1}\left[\frac{17}{6},\frac{3}{2},1,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]$$

$$\left.\left.\text{Sec}[e+f x]^2 \text{Tan}[e+f x]\right)\right)\Big/\left(11\left(-1+\text{Sec}[e+f x]^2\right)\right.$$

$$\left(17\left(a^2+b^2\right) \text{AppellF1}\left[\frac{11}{6},\frac{1}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$

$$3\left(2\, b^2 \text{AppellF1}\left[\frac{17}{6},\frac{1}{2},2,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]+\right.$$

$$\left.\left.\left(a^2+b^2\right) \text{AppellF1}\left[\frac{17}{6},\frac{3}{2},1,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]\right) \text{Sec}[e+f x]^2\right)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^{5/3}+\right.$$

$$b\,\mathrm{Sec}[e+f x]^{2/3}\left(-1+\mathrm{Sec}[e+f x]^2\right)\Big)\Big)+$$

$$\Bigg(\left(-1\right)^{1/6}\left(-a^2+b^2\right)\mathrm{ArcTan}\Big[\frac{-\sqrt{3}\,\left(a^2+b^2\right)^{1/6}+2\,\left(-1\right)^{1/6}b^{1/3}\,\mathrm{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\Big]$$

$$\mathrm{Sec}[e+f x]^{2/3}\Big(2\,b\,\mathrm{Sec}[e+f x]^2\,\mathrm{Tan}[e+f x]+$$

$$a\,\mathrm{Sec}[e+f x]\,\sqrt{\mathrm{Cos}[e+f x]^2\left(-1+\mathrm{Sec}[e+f x]^2\right)}\,\mathrm{Tan}[e+f x]+$$

$$\left(a\,\mathrm{Sec}[e+f x]\,\left(-2\,\mathrm{Cos}[e+f x]\,\left(-1+\mathrm{Sec}[e+f x]^2\right)\mathrm{Sin}[e+f x]+2\,\mathrm{Tan}[e+f x]\right)\right)\Big/$$

$$\left(2\,\sqrt{\mathrm{Cos}[e+f x]^2\left(-1+\mathrm{Sec}[e+f x]^2\right)}\right)\Big)\Bigg)\Big/\Big(2\,b^{2/3}\left(a^2+b^2\right)^{7/6}$$

$$\left(a\,\sqrt{1-\mathrm{Cos}[e+f x]^2}\,\mathrm{Sec}[e+f x]^{5/3}+b\,\mathrm{Sec}[e+f x]^{2/3}\left(-1+\mathrm{Sec}[e+f x]^2\right)\right)\Big)+$$

$$\Bigg(\left(-1\right)^{1/6}\left(-a^2+b^2\right)\mathrm{ArcTan}\Big[\frac{\sqrt{3}\,\left(a^2+b^2\right)^{1/6}+2\,\left(-1\right)^{1/6}b^{1/3}\,\mathrm{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\Big]$$

$$\mathrm{Sec}[e+f x]^{2/3}\Big(2\,b\,\mathrm{Sec}[e+f x]^2\,\mathrm{Tan}[e+f x]+$$

$$a\,\mathrm{Sec}[e+f x]\,\sqrt{\mathrm{Cos}[e+f x]^2\left(-1+\mathrm{Sec}[e+f x]^2\right)}\,\mathrm{Tan}[e+f x]+$$

$$\left(a\,\mathrm{Sec}[e+f x]\,\left(-2\,\mathrm{Cos}[e+f x]\,\left(-1+\mathrm{Sec}[e+f x]^2\right)\mathrm{Sin}[e+f x]+2\,\mathrm{Tan}[e+f x]\right)\right)\Big/$$

$$\left(2\,\sqrt{\mathrm{Cos}[e+f x]^2\left(-1+\mathrm{Sec}[e+f x]^2\right)}\right)\Big)\Bigg)\Big/\Big(2\,b^{2/3}\left(a^2+b^2\right)^{7/6}$$

$$\left(a\,\sqrt{1-\mathrm{Cos}[e+f x]^2}\,\mathrm{Sec}[e+f x]^{5/3}+b\,\mathrm{Sec}[e+f x]^{2/3}\left(-1+\mathrm{Sec}[e+f x]^2\right)\right)\Big)+$$

$$\Bigg(\left(-1\right)^{1/6}\left(-a^2+b^2\right)\mathrm{ArcTan}\Big[\frac{\left(-1\right)^{1/6}b^{1/3}\,\mathrm{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\Big]\,\mathrm{Sec}[e+f x]^{2/3}$$

$$\Big(2\,b\,\mathrm{Sec}[e+f x]^2\,\mathrm{Tan}[e+f x]+$$

$$a\,\mathrm{Sec}[e+f x]\,\sqrt{\mathrm{Cos}[e+f x]^2\left(-1+\mathrm{Sec}[e+f x]^2\right)}\,\mathrm{Tan}[e+f x]+$$

$$\left(a\,\mathrm{Sec}[e+f x]\,\left(-2\,\mathrm{Cos}[e+f x]\,\left(-1+\mathrm{Sec}[e+f x]^2\right)\mathrm{Sin}[e+f x]+2\,\mathrm{Tan}[e+f x]\right)\right)\Big/$$

$$\left(2\,\sqrt{\mathrm{Cos}[e+f x]^2\left(-1+\mathrm{Sec}[e+f x]^2\right)}\right)\Big)\Bigg)\Big/\Big(b^{2/3}\left(a^2+b^2\right)^{7/6}$$

$$\left(a\,\sqrt{1-\mathrm{Cos}[e+f x]^2}\,\mathrm{Sec}[e+f x]^{5/3}+b\,\mathrm{Sec}[e+f x]^{2/3}\left(-1+\mathrm{Sec}[e+f x]^2\right)\right)\Big)+$$

$$\Big(\left(-1\right)^{1/6}\sqrt{3}\,\left(-a^2+b^2\right)\mathrm{Log}\Big[\left(a^2+b^2\right)^{1/3}-\left(-1\right)^{1/6}\sqrt{3}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\mathrm{Sec}[e+f x]^{1/3}+$$

$$\left(-1\right)^{1/3}b^{2/3}\,\mathrm{Sec}[e+f x]^{2/3}\Big]\,\mathrm{Sec}[e+f x]^{2/3}\Big(2\,b\,\mathrm{Sec}[e+f x]^2\,\mathrm{Tan}[e+f x]+$$

$$a\,\mathrm{Sec}[e+f x]\,\sqrt{\mathrm{Cos}[e+f x]^2\left(-1+\mathrm{Sec}[e+f x]^2\right)}\,\mathrm{Tan}[e+f x]+$$

$$\left(a\,\mathrm{Sec}[e+f x]\,\left(-2\,\mathrm{Cos}[e+f x]\,\left(-1+\mathrm{Sec}[e+f x]^2\right)\mathrm{Sin}[e+f x]+2\,\mathrm{Tan}[e+f x]\right)\right)\Big/$$

$$\left(2\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\Bigg)\Bigg)\Bigg/\Bigg(4\,b^{2/3}\left(a^2+b^2\right)^{7/6}$$

$$\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\Bigg)-$$

$$\Bigg(\left(-1\right)^{1/6}\sqrt{3}\left(-a^2+b^2\right)\text{Log}\Big[\left(a^2+b^2\right)^{1/3}+\left(-1\right)^{1/6}\sqrt{3}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\text{Sec}[e+f x]^{1/3}+$$

$$\left(-1\right)^{1/3}b^{2/3}\,\text{Sec}[e+f x]^{2/3}\Big]\,\text{Sec}[e+f x]^{2/3}\Bigg(2\,b\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+$$

$$a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\,\text{Tan}[e+f x]+$$

$$\Big(a\,\text{Sec}[e+f x]\left(-2\,\text{Cos}[e+f x]\left(-1+\text{Sec}[e+f x]^2\right)\text{Sin}[e+f x]+2\,\text{Tan}[e+f x]\right)\Big)\Big/$$

$$\left(2\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\Bigg)\Bigg)\Bigg/\Bigg(4\,b^{2/3}\left(a^2+b^2\right)^{7/6}$$

$$\left(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\Bigg)+$$

$$\Bigg(33\,a^3\,\text{AppellF1}\Big[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^{10/3}$$

$$\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\Bigg(2\,b\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+$$

$$a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\,\text{Tan}[e+f x]+$$

$$\Big(a\,\text{Sec}[e+f x]\left(-2\,\text{Cos}[e+f x]\left(-1+\text{Sec}[e+f x]^2\right)\text{Sin}[e+f x]+2\,\text{Tan}[e+f x]\right)\Big)\Big/$$

$$\left(2\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\Bigg)\Bigg)\Bigg/\Bigg(\left(-1+\text{Sec}[e+f x]^2\right)$$

$$\Bigg(11\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\Bigg(2\,b^2\,\text{AppellF1}\Big[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Bigg)\,\text{Sec}[e+f x]^2\Bigg)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Bigg(a\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+$$

$$b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\Bigg)\Bigg)+$$

$$\Bigg(99\,a\,b^2\,\text{AppellF1}\Big[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^{10/3}$$

$$\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\Bigg(2\,b\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+$$

$$a\,\text{Sec}[e+f x]\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\,\text{Tan}[e+f x]+$$

$$\Big(a\,\text{Sec}[e+f x]\left(-2\,\text{Cos}[e+f x]\left(-1+\text{Sec}[e+f x]^2\right)\text{Sin}[e+f x]+2\,\text{Tan}[e+f x]\right)\Big)\Big/$$

$$\left(2\sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\Bigg)\Bigg)\Bigg/\Bigg(5\left(-1+\text{Sec}[e+f x]^2\right)$$

$$\Bigg(11\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\left(2 b^2 \text{AppellF1}\left[\frac{11}{6}, \frac{1}{2}, 2, \frac{17}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right) \text{AppellF1}\left[\frac{11}{6}, \frac{3}{2}, 1, \frac{17}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]\right) \text{Sec}[e+f x]^2\Big)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a \sqrt{1-\text{Cos}[e+f x]^2}\, \text{Sec}[e+f x]^{5/3}+b \text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\Big)\Big)-$$

$$\Bigg(204 a b^2 \text{AppellF1}\left[\frac{11}{6}, \frac{1}{2}, 1, \frac{17}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^{16/3} \sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\Bigg(2 b \text{Sec}[e+f x]^2 \text{Tan}[e+f x]+a \text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\, \text{Tan}[e+f x]+\left(a \text{Sec}[e+f x]\left(-2 \text{Cos}[e+f x]\left(-1+\text{Sec}[e+f x]^2\right) \text{Sin}[e+f x]+2 \text{Tan}[e+f x]\right)\right) \Big/ \left(2 \sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)\Bigg)\Bigg) \Big/ \Bigg(11\left(-1+\text{Sec}[e+f x]^2\right)$$

$$\Bigg(17\left(a^2+b^2\right) \text{AppellF1}\left[\frac{11}{6}, \frac{1}{2}, 1, \frac{17}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]+3\left(2 b^2 \text{AppellF1}\left[\frac{17}{6}, \frac{1}{2}, 2, \frac{23}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right) \text{AppellF1}\left[\frac{17}{6}, \frac{3}{2}, 1, \frac{23}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]\right) \text{Sec}[e+f x]^2\Bigg)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\left(a \sqrt{1-\text{Cos}[e+f x]^2}\, \text{Sec}[e+f x]^{5/3}+b \text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\right)\Bigg)-$$

$$\Bigg(33 a^3 \text{AppellF1}\left[\frac{5}{6}, \frac{1}{2}, 1, \frac{11}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^{10/3} \sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\left(-b+b \text{Sec}[e+f x]^2+a \text{Sec}[e+f x] \sqrt{\text{Cos}[e+f x]^2\left(-1+\text{Sec}[e+f x]^2\right)}\right)$$

$$\Bigg(6\left(2 b^2 \text{AppellF1}\left[\frac{11}{6}, \frac{1}{2}, 2, \frac{17}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right) \text{AppellF1}\left[\frac{11}{6}, \frac{3}{2}, 1, \frac{17}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]\right) \text{Sec}[e+f x]^2 \text{Tan}[e+f x]+$$

$$11\left(a^2+b^2\right)\left(\frac{1}{11\left(a^2+b^2\right)} 10 b^2 \text{AppellF1}\left[\frac{11}{6}, \frac{1}{2}, 2, \frac{17}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^2 \text{Tan}[e+f x]+\frac{5}{11} \text{AppellF1}\left[\frac{11}{6}, \frac{3}{2}, 1, \frac{17}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^2 \text{Tan}[e+f x]\right)+$$

$$3\,\text{Sec}[e+f x]^2\,\Bigg(2\,b^2\,\Bigg(\frac{1}{17\,(a^2+b^2)}44\,b^2\,\text{AppellF1}\Big[\frac{17}{6},\frac{1}{2},3,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+\frac{11}{17}\,\text{AppellF1}\Big[\frac{17}{6},\frac{3}{2},2,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\Bigg)+(a^2+b^2)\,\Bigg(\frac{1}{17\,(a^2+b^2)}22\,b^2\,\text{AppellF1}\Big[\frac{17}{6},\frac{3}{2},2,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+\frac{33}{17}\,\text{AppellF1}\Big[\frac{17}{6},\frac{5}{2},1,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)\Big/\Bigg(\big(-1+\text{Sec}[e+f x]^2\big)\,\Bigg(11\,(a^2+b^2)\,\text{AppellF1}\Big[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+3\,\Bigg(2\,b^2\,\text{AppellF1}\Big[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+(a^2+b^2)\,\text{AppellF1}\Big[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Bigg)\,\text{Sec}[e+f x]^2\Bigg)^2\,\big(-a^2+b^2\,(-1+\text{Sec}[e+f x]^2)\big)\,\Big(a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^{5/3}+b\,\text{Sec}[e+f x]^{2/3}\,\big(-1+\text{Sec}[e+f x]^2\big)\Big)\Bigg)-$$

$$\Bigg(99\,a\,b^2\,\text{AppellF1}\Big[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^{10/3}\,\sqrt{\text{Cos}[e+f x]^2\,\big(-1+\text{Sec}[e+f x]^2\big)}\,\Big(-b+b\,\text{Sec}[e+f x]^2+a\,\text{Sec}[e+f x]\,\sqrt{\text{Cos}[e+f x]^2\,\big(-1+\text{Sec}[e+f x]^2\big)}\Big)\,\Bigg(6\,\Bigg(2\,b^2\,\text{AppellF1}\Big[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+(a^2+b^2)\,\text{AppellF1}\Big[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Bigg)\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+11\,(a^2+b^2)\,\Bigg(\frac{1}{11\,(a^2+b^2)}10\,b^2\,\text{AppellF1}\Big[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+\frac{5}{11}\,\text{AppellF1}\Big[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\Bigg)+$$

$$3\,\text{Sec}[e+f x]^2\,\Bigg(2\,b^2\,\Bigg(\frac{1}{17\,(a^2+b^2)}44\,b^2\,\text{AppellF1}\Big[\frac{17}{6},\frac{1}{2},3,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+\frac{11}{17}\,\text{AppellF1}\Big[\frac{17}{6},\frac{3}{2},2,\frac{23}{6},$$

$$\text{Sec}[e+fx]^2,\ \frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]\,\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\Bigg)+\left(a^2+b^2\right)$$

$$\Bigg(\frac{1}{17\left(a^2+b^2\right)}22\,b^2\,\text{AppellF1}\Big[\frac{17}{6},\frac{3}{2},2,\frac{23}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]$$

$$\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]+\frac{33}{17}\,\text{AppellF1}\Big[\frac{17}{6},\frac{5}{2},1,\frac{23}{6},\text{Sec}[e+fx]^2,$$

$$\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]\,\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/\Bigg(5\left(-1+\text{Sec}[e+fx]^2\right)$$

$$\Bigg(11\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{5}{6},\frac{1}{2},1,\frac{11}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]+$$

$$3\Bigg(2\,b^2\,\text{AppellF1}\Big[\frac{11}{6},\frac{1}{2},2,\frac{17}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)$$

$$\text{AppellF1}\Big[\frac{11}{6},\frac{3}{2},1,\frac{17}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]\Bigg)\,\text{Sec}[e+fx]^2\Bigg)^2$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\Bigg(a\sqrt{1-\text{Cos}[e+fx]^2}\ \text{Sec}[e+fx]^{5/3}+$$

$$b\,\text{Sec}[e+fx]^{2/3}\left(-1+\text{Sec}[e+fx]^2\right)\Bigg)\Bigg)+$$

$$\Bigg(204\,a\,b^2\,\text{AppellF1}\Big[\frac{11}{6},\frac{1}{2},1,\frac{17}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]$$

$$\text{Sec}[e+fx]^{16/3}\sqrt{\text{Cos}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)}$$

$$\left(-b+b\,\text{Sec}[e+fx]^2+a\,\text{Sec}[e+fx]\sqrt{\text{Cos}[e+fx]^2\left(-1+\text{Sec}[e+fx]^2\right)}\right)$$

$$\Bigg(6\Bigg(2\,b^2\,\text{AppellF1}\Big[\frac{17}{6},\frac{1}{2},2,\frac{23}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)\text{AppellF1}\Big[$$

$$\frac{17}{6},\frac{3}{2},1,\frac{23}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]\Bigg)\,\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]+$$

$$17\left(a^2+b^2\right)\Bigg(\frac{1}{17\left(a^2+b^2\right)}22\,b^2\,\text{AppellF1}\Big[\frac{17}{6},\frac{1}{2},2,\frac{23}{6},\text{Sec}[e+fx]^2,$$

$$\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]\,\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]+\frac{11}{17}\,\text{AppellF1}\Big[\frac{17}{6},\frac{3}{2},$$

$$1,\frac{23}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]\,\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\Bigg)+$$

$$3\,\text{Sec}[e+fx]^2\Bigg(2\,b^2\Bigg(\frac{1}{23\left(a^2+b^2\right)}68\,b^2\,\text{AppellF1}\Big[\frac{23}{6},\frac{1}{2},3,\frac{29}{6},\text{Sec}[e+fx]^2,$$

$$\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]\,\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]+\frac{17}{23}\,\text{AppellF1}\Big[\frac{23}{6},\frac{3}{2},2,\frac{29}{6},$$

$$\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]\,\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\Bigg)+\left(a^2+b^2\right)$$

$$\Bigg(\frac{1}{23\left(a^2+b^2\right)}34\,b^2\,\text{AppellF1}\Big[\frac{23}{6},\frac{3}{2},2,\frac{29}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\Big]$$

$$\text{Sec}[e+f x]^2 \,\text{Tan}[e+f x]+\frac{51}{23}\,\text{AppellF1}\Big[\frac{23}{6},\frac{5}{2},1,\frac{29}{6},\text{Sec}[e+f x]^2,$$
$$\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\Big)\Big)\Big)\Big)\Big)\Big/\Big(11\left(-1+\text{Sec}[e+f x]^2\right)$$
$$\Big(17\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{11}{6},\frac{1}{2},1,\frac{17}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$
$$3\,\Big(2\,b^2\,\text{AppellF1}\Big[\frac{17}{6},\frac{1}{2},2,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)$$
$$\text{AppellF1}\Big[\frac{17}{6},\frac{3}{2},1,\frac{23}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Big)\,\text{Sec}[e+f x]^2\Big)^2$$
$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Big(a\,\sqrt{1-\text{Cos}[e+f x]^2}\,\,\text{Sec}[e+f x]^{5/3}+$$
$$b\,\text{Sec}[e+f x]^{2/3}\left(-1+\text{Sec}[e+f x]^2\right)\Big)\Big)\Big)\Big)$$

Problem 637: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{(d\,\text{Sec}[e+f x])^{1/3}}{(a+b\,\text{Tan}[e+f x])^2}\,dx$$

Optimal (type 6, 687 leaves, 18 steps):

$$\frac{5\,a\,b^{2/3}\,\text{ArcTan}\left[\frac{1}{\sqrt{3}}-\frac{2\,b^{1/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{\sqrt{3}\,\left(a^2+b^2\right)^{1/6}}\right]\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}}{2\,\sqrt{3}\,\left(a^2+b^2\right)^{11/6}\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}-$$

$$\frac{5\,a\,b^{2/3}\,\text{ArcTan}\left[\frac{1}{\sqrt{3}}+\frac{2\,b^{1/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{\sqrt{3}\,\left(a^2+b^2\right)^{1/6}}\right]\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}}{2\,\sqrt{3}\,\left(a^2+b^2\right)^{11/6}\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}-$$

$$\frac{5\,a\,b^{2/3}\,\text{ArcTanh}\left[\frac{b^{1/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{\left(a^2+b^2\right)^{1/6}}\right]\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}}{3\,\left(a^2+b^2\right)^{11/6}\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}+$$

$$\left(5\,a\,b^{2/3}\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}-b^{1/3}\,\left(a^2+b^2\right)^{1/6}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}+b^{2/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/3}\right]\right.$$
$$\left.\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}\right)\Big/\left(12\,\left(a^2+b^2\right)^{11/6}\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}\right)-$$
$$\left(5\,a\,b^{2/3}\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}+b^{1/3}\,\left(a^2+b^2\right)^{1/6}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}+b^{2/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/3}\right]\right.$$
$$\left.\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}\right)\Big/\left(12\,\left(a^2+b^2\right)^{11/6}\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}\right)+$$
$$\left(\text{AppellF1}\left[\frac{1}{2},\,2,\,\frac{5}{6},\,\frac{3}{2},\,\frac{b^2\,\text{Tan}[e+f\,x]^2}{a^2},\,-\text{Tan}[e+f\,x]^2\right]\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}\,\text{Tan}[e+f\,x]\right)\Big/$$
$$\left(a^2\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}\right)+$$
$$\left(b^2\,\text{AppellF1}\left[\frac{3}{2},\,2,\,\frac{5}{6},\,\frac{5}{2},\,\frac{b^2\,\text{Tan}[e+f\,x]^2}{a^2},\,-\text{Tan}[e+f\,x]^2\right]\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}\,\text{Tan}[e+f\,x]^3\right)\Big/$$
$$\left(3\,a^4\,f\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}\right)-\frac{a\,b\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}}{\left(a^2+b^2\right)\,f\,\left(a^2-b^2\,\text{Tan}[e+f\,x]^2\right)}$$

Result (type 6, 6547 leaves):

$$\left(\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}\left(\frac{1}{12\,\left(a-i\,b\right)\,\left(a+i\,b\right)\,\left(a^2+b^2\right)^{5/6}}\right.\right.$$
$$5\,\left(-1\right)^{5/6}\,a\,b^{2/3}\,\left(-2\,\text{ArcTan}\left[\sqrt{3}-\frac{2\,\left(-1\right)^{1/6}\,b^{1/3}\,\text{Sec}[e+f\,x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]+\right.$$
$$2\,\text{ArcTan}\left[\sqrt{3}+\frac{2\,\left(-1\right)^{1/6}\,b^{1/3}\,\text{Sec}[e+f\,x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]+4\,\text{ArcTan}\left[\frac{\left(-1\right)^{1/6}\,b^{1/3}\,\text{Sec}[e+f\,x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]-$$
$$\sqrt{3}\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}-\left(-1\right)^{1/6}\,\sqrt{3}\,b^{1/3}\,\left(a^2+b^2\right)^{1/6}\,\text{Sec}[e+f\,x]^{1/3}+\right.$$
$$\left.\left(-1\right)^{1/3}\,b^{2/3}\,\text{Sec}[e+f\,x]^{2/3}\right]+\sqrt{3}\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}+\right.$$
$$\left.\left.\left(-1\right)^{1/6}\,\sqrt{3}\,b^{1/3}\,\left(a^2+b^2\right)^{1/6}\,\text{Sec}[e+f\,x]^{1/3}+\left(-1\right)^{1/3}\,b^{2/3}\,\text{Sec}[e+f\,x]^{2/3}\right]\right)+$$
$$3\left(-\left(\left(7\,\left(3\,a^2-2\,b^2\right)\,\text{AppellF1}\left[\frac{1}{6},\,\frac{1}{2},\,1,\,\frac{7}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right.\right.\right.$$
$$\left.\sqrt{1-\text{Cos}[e+f\,x]^2}\,\text{Sec}[e+f\,x]^{4/3}\right)\Big/\left(3\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right.$$
$$\left(7\,\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{1}{6},\,\frac{1}{2},\,1,\,\frac{7}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+3\right.$$

$$\left(2\,b^2\,\text{AppellF1}\left[\frac{7}{6},\,\frac{1}{2},\,2,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$

$$\left.\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{7}{6},\,\frac{3}{2},\,1,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right)$$

$$\left.\left.\text{Sec}[e+f\,x]^2\right)\,\left(-a^2+b^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)\right)+$$

$$\frac{1}{21}\,b\,\text{Sec}[e+f\,x]^{1/3}\,\left(\frac{-7\,a+7\,b\,\sqrt{1-\text{Cos}[e+f\,x]^2}\,\,\text{Sec}[e+f\,x]}{\left(a^2+b^2\right)\,\left(a^2+b^2-b^2\,\text{Sec}[e+f\,x]^2\right)}-\right.$$

$$\left(26\,b\,\text{AppellF1}\left[\frac{7}{6},\,\frac{1}{2},\,1,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right.$$

$$\left.\sqrt{1-\text{Cos}[e+f\,x]^2}\,\,\text{Sec}[e+f\,x]^3\right)\Big/\left(\left(-1+\text{Sec}[e+f\,x]^2\right)\right.$$

$$\left(13\,\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{7}{6},\,\frac{1}{2},\,1,\,\frac{13}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$

$$3\,\left(2\,b^2\,\text{AppellF1}\left[\frac{13}{6},\,\frac{1}{2},\,2,\,\frac{19}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$

$$\left.\left(a^2+b^2\right)\,\text{AppellF1}\left[\frac{13}{6},\,\frac{3}{2},\,1,\,\frac{19}{6},\,\text{Sec}[e+f\,x]^2,\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right)$$

$$\left.\left.\left.\left.\left.\text{Sec}[e+f\,x]^2\right)\,\left(-a^2+b^2\,\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)\right)\right)\right)\Big/$$

$$\left(f\,\left(a+b\,\text{Tan}[e+f\,x]\right)^2\,\left(\frac{1}{12\,\left(a-\mathrm{i}\,b\right)\,\left(a+\mathrm{i}\,b\right)\,\left(a^2+b^2\right)^{5/6}}\right.\right.$$

5
$(-1)^{5/6}$
a
$b^{2/3}$

$$\left(\frac{4\,(-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f\,x]^{4/3}\,\text{Sin}[e+f\,x]}{3\,\left(a^2+b^2\right)^{1/6}\,\left(1+\left(\sqrt{3}-\frac{2\,(-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f\,x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right)^2\right)}+\right.$$

$$\frac{4\,(-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f\,x]^{4/3}\,\text{Sin}[e+f\,x]}{3\,\left(a^2+b^2\right)^{1/6}\,\left(1+\left(\sqrt{3}+\frac{2\,(-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f\,x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right)^2\right)}+$$

$$\frac{4\,(-1)^{1/6}\,b^{1/3}\,\text{Sec}[e+f\,x]^{4/3}\,\text{Sin}[e+f\,x]}{3\,\left(a^2+b^2\right)^{1/6}\,\left(1+\frac{(-1)^{1/3}\,b^{2/3}\,\text{Sec}[e+f\,x]^{2/3}}{\left(a^2+b^2\right)^{1/3}}\right)}-$$

$$\left(\sqrt{3}\,\left(-\frac{(-1)^{1/6}\,b^{1/3}\,\left(a^2+b^2\right)^{1/6}\,\text{Sec}[e+f\,x]^{4/3}\,\text{Sin}[e+f\,x]}{\sqrt{3}}+\right.\right.$$

$$\frac{2}{3}\left(-1\right)^{1/3} b^{2/3} \operatorname{Sec}[e+f x]^{5/3} \operatorname{Sin}[e+f x]\Big)\Big)\Big/$$

$$\left(\left(a^2+b^2\right)^{1/3}-\left(-1\right)^{1/6}\sqrt{3}\, b^{1/3}\left(a^2+b^2\right)^{1/6} \operatorname{Sec}[e+f x]^{1/3}+\left(-1\right)^{1/3} b^{2/3} \operatorname{Sec}[e+f x]^{2/3}\right)+$$

$$\Bigg(\sqrt{3}\,\Bigg(\frac{\left(-1\right)^{1/6} b^{1/3}\left(a^2+b^2\right)^{1/6} \operatorname{Sec}[e+f x]^{4/3} \operatorname{Sin}[e+f x]}{\sqrt{3}}+$$

$$\frac{2}{3}\left(-1\right)^{1/3} b^{2/3} \operatorname{Sec}[e+f x]^{5/3} \operatorname{Sin}[e+f x]\Bigg)\Bigg)\Big/\Bigg(\Bigg(\left(a^2+b^2\right)^{1/3}+$$

$$\left(-1\right)^{1/6}\sqrt{3}\, b^{1/3}\left(a^2+b^2\right)^{1/6} \operatorname{Sec}[e+f x]^{1/3}+\left(-1\right)^{1/3} b^{2/3} \operatorname{Sec}[e+f x]^{2/3}\Bigg)\Bigg)+$$

$$3\Bigg(\Bigg(14 b^2\left(3 a^2-2 b^2\right) \operatorname{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\operatorname{Sec}[e+f x]^2,\frac{b^2 \operatorname{Sec}[e+f x]^2}{a^2+b^2}\Big]$$

$$\sqrt{1-\operatorname{Cos}[e+f x]^2}\, \operatorname{Sec}[e+f x]^{13/3} \operatorname{Sin}[e+f x]\Bigg)\Big/\Bigg(3\left(-1+\operatorname{Sec}[e+f x]^2\right)$$

$$\Bigg(7\left(a^2+b^2\right) \operatorname{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\operatorname{Sec}[e+f x]^2,\frac{b^2 \operatorname{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\Bigg(2 b^2 \operatorname{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\operatorname{Sec}[e+f x]^2,\frac{b^2 \operatorname{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$\left(a^2+b^2\right) \operatorname{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\operatorname{Sec}[e+f x]^2,\frac{b^2 \operatorname{Sec}[e+f x]^2}{a^2+b^2}\Big]\Bigg)$$

$$\operatorname{Sec}[e+f x]^2\Bigg)\left(-a^2+b^2\left(-1+\operatorname{Sec}[e+f x]^2\right)\right)^2\Bigg)+$$

$$\Bigg(14\left(3 a^2-2 b^2\right) \operatorname{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\operatorname{Sec}[e+f x]^2,\frac{b^2 \operatorname{Sec}[e+f x]^2}{a^2+b^2}\Big]$$

$$\sqrt{1-\operatorname{Cos}[e+f x]^2}\, \operatorname{Sec}[e+f x]^{13/3} \operatorname{Sin}[e+f x]\Bigg)\Big/\Bigg(3\left(-1+\operatorname{Sec}[e+f x]^2\right)^2$$

$$\Bigg(7\left(a^2+b^2\right) \operatorname{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\operatorname{Sec}[e+f x]^2,\frac{b^2 \operatorname{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\Bigg(2 b^2 \operatorname{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\operatorname{Sec}[e+f x]^2,\frac{b^2 \operatorname{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$\left(a^2+b^2\right) \operatorname{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\operatorname{Sec}[e+f x]^2,\frac{b^2 \operatorname{Sec}[e+f x]^2}{a^2+b^2}\Big]\Bigg)$$

$$\operatorname{Sec}[e+f x]^2\Bigg)\left(-a^2+b^2\left(-1+\operatorname{Sec}[e+f x]^2\right)\right)\Bigg)-$$

$$\Bigg(7\left(3 a^2-2 b^2\right) \operatorname{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\operatorname{Sec}[e+f x]^2,\frac{b^2 \operatorname{Sec}[e+f x]^2}{a^2+b^2}\Big]$$

$$\operatorname{Sec}[e+f x]^{1/3} \operatorname{Sin}[e+f x]\Bigg)\Big/\Bigg(3\sqrt{1-\operatorname{Cos}[e+f x]^2}\left(-1+\operatorname{Sec}[e+f x]^2\right)$$

$$\Bigg(7\left(a^2+b^2\right) \operatorname{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\operatorname{Sec}[e+f x]^2,\frac{b^2 \operatorname{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\left(2b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)$$

$$\left.\text{Sec}[e+fx]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\Bigg)-$$

$$\left(28\left(3a^2-2b^2\right)\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right.$$

$$\left.\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^{7/3}\,\text{Sin}[e+fx]\right)\Big/\left(9\left(-1+\text{Sec}[e+fx]^2\right)\right.$$

$$\left(7\left(a^2+b^2\right)\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\right.$$

$$3\left(2b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$

$$\left.\left.\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\text{Sec}[e+fx]^2\right)$$

$$\left.\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\right)+\frac{1}{63}\,b\,\text{Sec}[e+fx]^{4/3}$$

$$\left(\frac{-7a+7b\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]}{\left(a^2+b^2\right)\left(a^2+b^2-b^2\,\text{Sec}[e+fx]^2\right)}-\left(26\,b\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\right.\right.\right.$$

$$\left.\left.\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^3\right)\Big/\left(\left(-1+\text{Sec}[e+fx]^2\right)\right.$$

$$\left(13\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\right.$$

$$3\left(2b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)$$

$$\left.\left.\left.\text{Sec}[e+fx]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\right)\right)$$

$$\text{Sin}[e+fx]-\left(7\left(3a^2-2b^2\right)\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^{4/3}\right.$$

$$\left(\frac{1}{7\left(a^2+b^2\right)}2b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^2\right.$$

$$\text{Tan}[e+fx]+\frac{1}{7}\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]$$

$$\left.\left.\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\right)\right)\Big/\left(3\left(-1+\text{Sec}[e+fx]^2\right)\right.$$

$$\left(7\left(a^2+b^2\right)\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\right.$$

$$3\left(2b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\right.$$

$$\left.\left.\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\right.$$

$$\left.\text{Sec}[e+fx]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\Big)+$$

$$\left(7\left(3a^2-2b^2\right)\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\sqrt{1-\text{Cos}[e+fx]^2}\right.$$

$$\text{Sec}[e+fx]^{4/3}\left(6\left(2b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\right.\right.$$

$$\left.\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)$$

$$\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]+7\left(a^2+b^2\right)\left(\frac{1}{7\left(a^2+b^2\right)}2b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\right.\right.$$

$$\left.\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]+\frac{1}{7}\text{AppellF1}\Big[$$

$$\left.\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\Big)+$$

$$3\,\text{Sec}[e+fx]^2\left(2b^2\left(\frac{1}{13\left(a^2+b^2\right)}28b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},3,\frac{19}{6},\text{Sec}[e+fx]^2,\right.\right.\right.$$

$$\left.\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]+\frac{7}{13}\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},2,\frac{19}{6},\right.$$

$$\left.\left.\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\right)+\left(a^2+b^2\right)$$

$$\left(\frac{1}{13\left(a^2+b^2\right)}14b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right.$$

$$\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]+\frac{21}{13}\text{AppellF1}\left[\frac{13}{6},\frac{5}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\right.$$

$$\left.\left.\left.\left.\left.\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\right)\right)\right)\right)\Big/\left(3\left(-1+\text{Sec}[e+fx]^2\right)\right.$$

$$\left(7\left(a^2+b^2\right)\text{AppellF1}\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+3\right.$$

$$\left(2b^2\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$

$$\left.\left.\text{AppellF1}\left[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\text{Sec}[e+fx]^2\right)^2$$

$$\left.\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\right)+\frac{1}{21}b\,\text{Sec}[e+fx]^{1/3}$$

$$\left(\left(2b^2\,\text{Sec}[e+fx]^2\left(-7a+7b\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]\right)\text{Tan}[e+fx]\right)\Big/\right.$$

$$\left(\left(a^2+b^2\right)\left(a^2+b^2-b^2\,\text{Sec}[e+f\,x]^2\right)^2\right)+$$

$$\left(52\,b^3\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right.$$
$$\left.\sqrt{1-\text{Cos}[e+f\,x]^2}\;\text{Sec}[e+f\,x]^5\,\text{Tan}[e+f\,x]\right)\Big/\left(\left(-1+\text{Sec}[e+f\,x]^2\right)\right.$$
$$\left(13\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$
$$3\left(2\,b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$
$$\left.\left(a^2+b^2\right)\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right)$$
$$\left.\left.\text{Sec}[e+f\,x]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+f\,x]^2\right)\right)^2\right)+$$

$$\left(52\,b\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right.$$
$$\left.\sqrt{1-\text{Cos}[e+f\,x]^2}\;\text{Sec}[e+f\,x]^5\,\text{Tan}[e+f\,x]\right)\Big/\left(\left(-1+\text{Sec}[e+f\,x]^2\right)^2\right.$$
$$\left(13\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$
$$3\left(2\,b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$
$$\left.\left(a^2+b^2\right)\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right)$$
$$\left.\left.\text{Sec}[e+f\,x]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)-$$

$$\left(26\,b\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\text{Sec}[e+f\,x]\right.$$
$$\left.\text{Tan}[e+f\,x]\right)\Big/\left(\sqrt{1-\text{Cos}[e+f\,x]^2}\left(-1+\text{Sec}[e+f\,x]^2\right)\right.$$
$$\left(13\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$
$$3\left(2\,b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$
$$\left.\left(a^2+b^2\right)\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right)$$
$$\left.\left.\text{Sec}[e+f\,x]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+f\,x]^2\right)\right)\right)-$$

$$\left(78\,b\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\right.$$
$$\left.\sqrt{1-\text{Cos}[e+f\,x]^2}\;\text{Sec}[e+f\,x]^3\,\text{Tan}[e+f\,x]\right)\Big/\left(\left(-1+\text{Sec}[e+f\,x]^2\right)\right.$$
$$\left(13\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f\,x]^2,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]+\right.$$

$$3\left(2b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)$$

$$\left.\text{Sec}[e+fx]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\Bigg)+$$

$$\left(\frac{7\,b\,\text{Sin}[e+fx]}{\sqrt{1-\text{Cos}[e+fx]^2}}+7\,b\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]\,\text{Tan}[e+fx]\right)\Big/$$

$$\left(\left(a^2+b^2\right)\left(a^2+b^2-b^2\,\text{Sec}[e+fx]^2\right)\right)-$$

$$\left(26\,b\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^3\left(\frac{1}{13\left(a^2+b^2\right)}14\,b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\right.\right.\right.$$

$$\left.\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]+\frac{7}{13}\,\text{AppellF1}\left[\frac{13}{6},\right.$$

$$\left.\left.\left.\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\right)\right)\Big/$$

$$\left(\left(-1+\text{Sec}[e+fx]^2\right)\left(13\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\right.\right.\right.$$

$$\left.\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+3\left(2b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\right.\right.$$

$$\left.\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\right.$$

$$\left.\left.\left.\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\text{Sec}[e+fx]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+fx]^2\right)\right)\Bigg)+$$

$$\left(26\,b\,\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\sqrt{1-\text{Cos}[e+fx]^2}\right.$$

$$\text{Sec}[e+fx]^3\left(6\left(2b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\right.\right.$$

$$\left.\left(a^2+b^2\right)\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)$$

$$\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]+13\left(a^2+b^2\right)\left(\frac{1}{13\left(a^2+b^2\right)}14\,b^2\,\text{AppellF1}\left[\frac{13}{6},\right.\right.$$

$$\left.\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]+$$

$$\frac{7}{13}\,\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]$$

$$\left.\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\right)+3\,\text{Sec}[e+fx]^2$$

$$\left(2b^2\left(\left(52\,b^2\,\text{AppellF1}\left[\frac{19}{6},\frac{1}{2},3,\frac{25}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right.\right.\right.$$

$$\left.\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\right)\Big/\left(19\left(a^2+b^2\right)\right)+\frac{13}{19}\,\text{AppellF1}\left[\frac{19}{6},\frac{3}{2},2,\right.$$

$$\left.\left.\frac{25}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^2 \text{Tan}[e+f x]\right)+$$

$$\left(a^2+b^2\right)\left(\left(26 b^2 \text{AppellF1}\left[\frac{19}{6}, \frac{3}{2}, 2, \frac{25}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]\right.\right.$$

$$\left.\text{Sec}[e+f x]^2 \text{Tan}[e+f x]\right) \Big/ \left(19\left(a^2+b^2\right)\right)+\frac{39}{19} \text{AppellF1}\left[\frac{19}{6}, \frac{5}{2}, 1,\right.$$

$$\left.\left.\left.\left.\frac{25}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^2 \text{Tan}[e+f x]\right)\right)\right)\right) \Big/$$

$$\left(\left(-1+\text{Sec}[e+f x]^2\right)\left(13\left(a^2+b^2\right) \text{AppellF1}\left[\frac{7}{6}, \frac{1}{2}, 1, \frac{13}{6}, \text{Sec}[e+f x]^2,\right.\right.\right.$$

$$\left.\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]+3\left(2 b^2 \text{AppellF1}\left[\frac{13}{6}, \frac{1}{2}, 2, \frac{19}{6}, \text{Sec}[e+f x]^2,\right.\right.$$

$$\left.\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]+\left(a^2+b^2\right) \text{AppellF1}\left[\frac{13}{6}, \frac{3}{2}, 1, \frac{19}{6}, \text{Sec}[e+f x]^2,\right.$$

$$\left.\left.\left.\left.\left.\left.\frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]\right) \text{Sec}[e+f x]^2\right)^2\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)\right)\right)\right)$$

Problem 638: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{1}{(d \text{Sec}[e+f x])^{1/3}(a+b \text{Tan}[e+f x])^2} \, dx$$

Optimal (type 6, 715 leaves, 19 steps):

$$\frac{7\,a\,b}{\left(a^2+b^2\right)^2 f\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}}-\frac{7\,a\,b^{4/3}\,\text{ArcTan}\left[\frac{1}{\sqrt{3}}-\frac{2\,b^{1/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{\sqrt{3}\,\left(a^2+b^2\right)^{1/6}}\right]\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{2\,\sqrt{3}\,\left(a^2+b^2\right)^{13/6} f\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}}+$$

$$\frac{7\,a\,b^{4/3}\,\text{ArcTan}\left[\frac{1}{\sqrt{3}}+\frac{2\,b^{1/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{\sqrt{3}\,\left(a^2+b^2\right)^{1/6}}\right]\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{2\,\sqrt{3}\,\left(a^2+b^2\right)^{13/6} f\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}}-$$

$$\frac{7\,a\,b^{4/3}\,\text{ArcTanh}\left[\frac{b^{1/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{\left(a^2+b^2\right)^{1/6}}\right]\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}}{3\,\left(a^2+b^2\right)^{13/6} f\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}}+$$

$$\left(7\,a\,b^{4/3}\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}-b^{1/3}\,\left(a^2+b^2\right)^{1/6}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}+b^{2/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/3}\right]\right.$$
$$\left.\left(\text{Sec}[e+f\,x]^2\right)^{1/6}\right)\Big/\left(12\,\left(a^2+b^2\right)^{13/6} f\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}\right)-$$
$$\left(7\,a\,b^{4/3}\,\text{Log}\left[\left(a^2+b^2\right)^{1/3}+b^{1/3}\,\left(a^2+b^2\right)^{1/6}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}+b^{2/3}\,\left(\text{Sec}[e+f\,x]^2\right)^{1/3}\right]\right.$$
$$\left.\left(\text{Sec}[e+f\,x]^2\right)^{1/6}\right)\Big/\left(12\,\left(a^2+b^2\right)^{13/6} f\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}\right)+$$
$$\left(\text{AppellF1}\left[\frac{1}{2},\,2,\,\frac{7}{6},\,\frac{3}{2},\,\frac{b^2\,\text{Tan}[e+f\,x]^2}{a^2},\,-\text{Tan}[e+f\,x]^2\right]\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}\,\text{Tan}[e+f\,x]\right)\Big/$$
$$\left(a^2\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}\right)+$$
$$\left(b^2\,\text{AppellF1}\left[\frac{3}{2},\,2,\,\frac{7}{6},\,\frac{5}{2},\,\frac{b^2\,\text{Tan}[e+f\,x]^2}{a^2},\,-\text{Tan}[e+f\,x]^2\right]\,\left(\text{Sec}[e+f\,x]^2\right)^{1/6}\,\text{Tan}[e+f\,x]^3\right)\Big/$$
$$\left(3\,a^4\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}\right)-\frac{a\,b}{\left(a^2+b^2\right)\,f\,\left(d\,\text{Sec}[e+f\,x]\right)^{1/3}\,\left(a^2-b^2\,\text{Tan}[e+f\,x]^2\right)}$$

Result (type 6, 56 289 leaves) : Display of huge result suppressed!

Problem 639: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\frac{1}{\left(d\,\text{Sec}[e+f\,x]\right)^{5/3}\,\left(a+b\,\text{Tan}[e+f\,x]\right)^2}\,dx$$

Optimal (type 6, 717 leaves, 19 steps) :

$$\frac{11\,a\,b}{5\,\left(a^2+b^2\right)^2 f\,\left(d\,\mathrm{Sec}[e+f\,x]\right)^{5/3}}+\frac{11\,a\,b^{8/3}\,\mathrm{ArcTan}\!\left[\frac{1}{\sqrt{3}}-\frac{2\,b^{1/3}\,\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}}{\sqrt{3}\,\left(a^2+b^2\right)^{1/6}}\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{5/6}}{2\,\sqrt{3}\,\left(a^2+b^2\right)^{17/6} f\,\left(d\,\mathrm{Sec}[e+f\,x]\right)^{5/3}}-$$

$$\frac{11\,a\,b^{8/3}\,\mathrm{ArcTan}\!\left[\frac{1}{\sqrt{3}}+\frac{2\,b^{1/3}\,\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}}{\sqrt{3}\,\left(a^2+b^2\right)^{1/6}}\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{5/6}}{2\,\sqrt{3}\,\left(a^2+b^2\right)^{17/6} f\,\left(d\,\mathrm{Sec}[e+f\,x]\right)^{5/3}}-$$

$$\frac{11\,a\,b^{8/3}\,\mathrm{ArcTanh}\!\left[\frac{b^{1/3}\,\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}}{\left(a^2+b^2\right)^{1/6}}\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{5/6}}{3\,\left(a^2+b^2\right)^{17/6} f\,\left(d\,\mathrm{Sec}[e+f\,x]\right)^{5/3}}+$$

$$\left(11\,a\,b^{8/3}\,\mathrm{Log}\!\left[\left(a^2+b^2\right)^{1/3}-b^{1/3}\left(a^2+b^2\right)^{1/6}\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}+b^{2/3}\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/3}\right]\right.$$
$$\left.\left(\mathrm{Sec}[e+f\,x]^2\right)^{5/6}\right)\Big/\left(12\,\left(a^2+b^2\right)^{17/6} f\,\left(d\,\mathrm{Sec}[e+f\,x]\right)^{5/3}\right)-$$
$$\left(11\,a\,b^{8/3}\,\mathrm{Log}\!\left[\left(a^2+b^2\right)^{1/3}+b^{1/3}\left(a^2+b^2\right)^{1/6}\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/6}+b^{2/3}\left(\mathrm{Sec}[e+f\,x]^2\right)^{1/3}\right]\right.$$
$$\left.\left(\mathrm{Sec}[e+f\,x]^2\right)^{5/6}\right)\Big/\left(12\,\left(a^2+b^2\right)^{17/6} f\,\left(d\,\mathrm{Sec}[e+f\,x]\right)^{5/3}\right)+$$
$$\left(\mathrm{AppellF1}\!\left[\frac{1}{2},2,\frac{11}{6},\frac{3}{2},\frac{b^2\,\mathrm{Tan}[e+f\,x]^2}{a^2},-\mathrm{Tan}[e+f\,x]^2\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{5/6}\mathrm{Tan}[e+f\,x]\right)\Big/$$
$$\left(a^2 f\,\left(d\,\mathrm{Sec}[e+f\,x]\right)^{5/3}\right)+$$
$$\left(b^2\,\mathrm{AppellF1}\!\left[\frac{3}{2},2,\frac{11}{6},\frac{5}{2},\frac{b^2\,\mathrm{Tan}[e+f\,x]^2}{a^2},-\mathrm{Tan}[e+f\,x]^2\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{5/6}\mathrm{Tan}[e+f\,x]^3\right)\Big/$$
$$\left(3\,a^4 f\,\left(d\,\mathrm{Sec}[e+f\,x]\right)^{5/3}\right)-\frac{a\,b}{\left(a^2+b^2\right) f\,\left(d\,\mathrm{Sec}[e+f\,x]\right)^{5/3}\left(a^2-b^2\,\mathrm{Tan}[e+f\,x]^2\right)}$$

Result (type 6, 7441 leaves) :

$$\left(\frac{1}{12\,\left(a-\mathrm{i}\,b\right)^2\left(a+\mathrm{i}\,b\right)^2\left(a^2+b^2\right)^{5/6}}\right.$$
$$11\,(-1)^{5/6}\,a\,b^{8/3}\left(-2\,\mathrm{ArcTan}\!\left[\sqrt{3}-\frac{2\,(-1)^{1/6}\,b^{1/3}\,\mathrm{Sec}[e+f\,x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]+\right.$$
$$2\,\mathrm{ArcTan}\!\left[\sqrt{3}+\frac{2\,(-1)^{1/6}\,b^{1/3}\,\mathrm{Sec}[e+f\,x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]+$$
$$4\,\mathrm{ArcTan}\!\left[\frac{(-1)^{1/6}\,b^{1/3}\,\mathrm{Sec}[e+f\,x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right]-\sqrt{3}\,\mathrm{Log}\!\left[\left(a^2+b^2\right)^{1/3}-\right.$$
$$\left.(-1)^{1/6}\sqrt{3}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\mathrm{Sec}[e+f\,x]^{1/3}+(-1)^{1/3}\,b^{2/3}\,\mathrm{Sec}[e+f\,x]^{2/3}\right]+\sqrt{3}\,\mathrm{Log}\!\left[\right.$$
$$\left.\left.\left.\left(a^2+b^2\right)^{1/3}+(-1)^{1/6}\sqrt{3}\,b^{1/3}\left(a^2+b^2\right)^{1/6}\mathrm{Sec}[e+f\,x]^{1/3}+(-1)^{1/3}\,b^{2/3}\,\mathrm{Sec}[e+f\,x]^{2/3}\right]\right)\right)+$$
$$\frac{1}{35\,\left(a^2+b^2\right)^2\,\mathrm{Sec}[e+f\,x]^{5/3}}\left(-\left(\left(49\,\left(6\,a^6+51\,a^4\,b^2+29\,a^2\,b^4-16\,b^6\right)\mathrm{AppellF1}\!\left[\frac{1}{6},\frac{1}{2},\right.\right.\right.\right.$$
$$\left.\left.1,\frac{7}{6},\mathrm{Sec}[e+f\,x]^2,\frac{b^2\,\mathrm{Sec}[e+f\,x]^2}{a^2+b^2}\right]\sqrt{1-\mathrm{Cos}[e+f\,x]^2}\;\mathrm{Sec}[e+f\,x]^3\right)\Big/$$
$$\left(\left(-1+\mathrm{Sec}[e+f\,x]^2\right)\left(7\,\left(a^2+b^2\right)\mathrm{AppellF1}\!\left[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\mathrm{Sec}[e+f\,x]^2,\right.\right.\right.$$

$$\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+3\left(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\right.$$

$$\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,$$

$$\left.\left.\left.\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\right)\text{Sec}[e+f x]^2\right)\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)\right)+$$

$$\frac{1}{a^2-b^2\left(-1+\text{Sec}[e+f x]^2\right)}\left(42\,a^3\,b+42\,a\,b^3+21\,a^4\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]-\right.$$

$$21\,b^4\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]-77\,a\,b^3\,\text{Sec}[e+f x]^2-$$

$$21\,a^2\,b^2\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+56\,b^4\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+$$

$$\left(26\,b^2\left(-3\,a^4+5\,a^2\,b^2+8\,b^4\right)\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\right.$$

$$\left.\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^5\right)\Big/\left(\left(-1+\text{Sec}[e+f x]^2\right)\left(13\left(a^2+b^2\right)\text{AppellF1}\Big[\right.\right.$$

$$\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+3\left(2\,b^2\,\text{AppellF1}\Big[\frac{13}{6},\right.$$

$$\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{13}{6},$$

$$\left.\left.\left.\left.\left.\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\right)\text{Sec}[e+f x]^2\right)\right)\right)\right)\right)\Big/$$

$$\left(f\left(d\,\text{Sec}[e+f x]\right)^{5/3}\left(a+b\,\text{Tan}[e+f x]\right)^2\left(-\frac{1}{21\left(a^2+b^2\right)^2\text{Sec}[e+f x]^{2/3}}\right.\right.$$

$$\left(-\left(\left(49\left(6\,a^6+51\,a^4\,b^2+29\,a^2\,b^4-16\,b^6\right)\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\right.\right.\right.$$

$$\left.\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3\right)\Big/\left(\left(-1+\text{Sec}[e+f x]^2\right)\right.$$

$$\left(7\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\right.$$

$$3\left(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)\right.$$

$$\left.\left.\text{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\right)\text{Sec}[e+f x]^2\right)$$

$$\left.\left.\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\right)\right)+\frac{1}{a^2-b^2\left(-1+\text{Sec}[e+f x]^2\right)}$$

$$\left(42\,a^3\,b+42\,a\,b^3+21\,a^4\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]-21\,b^4\sqrt{1-\text{Cos}[e+f x]^2}\right.$$

$$\text{Sec}[e+f x]-77\,a\,b^3\,\text{Sec}[e+f x]^2-21\,a^2\,b^2\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+$$

$$56\,b^4\sqrt{1-\text{Cos}[e+f x]^2}\,\text{Sec}[e+f x]^3+\left(26\,b^2\left(-3\,a^4+5\,a^2\,b^2+8\,b^4\right)\right.$$

$$\text{AppellF1}\left[\frac{7}{6}, \frac{1}{2}, 1, \frac{13}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]$$

$$\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^5\Big) \Big/ \Big(\left(-1+\text{Sec}[e+f x]^2\right) \Big(13 \left(a^2+b^2\right)$$

$$\text{AppellF1}\left[\frac{7}{6}, \frac{1}{2}, 1, \frac{13}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right] + 3 \Big(2 b^2 \text{AppellF1}\Big[$$

$$\frac{13}{6}, \frac{1}{2}, 2, \frac{19}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\Big] + \left(a^2+b^2\right) \text{AppellF1}\Big[$$

$$\frac{13}{6}, \frac{3}{2}, 1, \frac{19}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Big) \text{Sec}[e+f x]^2\Big)\Big)\Big)\Big)$$

$$\text{Sin}[e+f x] + \frac{1}{12 (a-\mathrm{i}\, b)^2 (a+\mathrm{i}\, b)^2 \left(a^2+b^2\right)^{5/6}} 11 (-1)^{5/6} a\, b^{8/3}$$

$$\Bigg(\frac{4 (-1)^{1/6} b^{1/3} \text{Sec}[e+f x]^{4/3} \text{Sin}[e+f x]}{3 \left(a^2+b^2\right)^{1/6} \left(1+\left(\sqrt{3}-\frac{2 (-1)^{1/6} b^{1/3} \text{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right)^2\right)} +$$

$$\frac{4 (-1)^{1/6} b^{1/3} \text{Sec}[e+f x]^{4/3} \text{Sin}[e+f x]}{3 \left(a^2+b^2\right)^{1/6} \left(1+\left(\sqrt{3}+\frac{2 (-1)^{1/6} b^{1/3} \text{Sec}[e+f x]^{1/3}}{\left(a^2+b^2\right)^{1/6}}\right)^2\right)} +$$

$$\frac{4 (-1)^{1/6} b^{1/3} \text{Sec}[e+f x]^{4/3} \text{Sin}[e+f x]}{3 \left(a^2+b^2\right)^{1/6} \left(1+\frac{(-1)^{1/3} b^{2/3} \text{Sec}[e+f x]^{2/3}}{\left(a^2+b^2\right)^{1/3}}\right)} -$$

$$\Bigg(\sqrt{3} \Bigg(-\frac{(-1)^{1/6} b^{1/3} \left(a^2+b^2\right)^{1/6} \text{Sec}[e+f x]^{4/3} \text{Sin}[e+f x]}{\sqrt{3}} +$$

$$\frac{2}{3} (-1)^{1/3} b^{2/3} \text{Sec}[e+f x]^{5/3} \text{Sin}[e+f x]\Bigg)\Bigg) \Big/$$

$$\left(\left(a^2+b^2\right)^{1/3} - (-1)^{1/6} \sqrt{3}\, b^{1/3} \left(a^2+b^2\right)^{1/6} \text{Sec}[e+f x]^{1/3} + (-1)^{1/3} b^{2/3} \text{Sec}[e+f x]^{2/3}\right) +$$

$$\Bigg(\sqrt{3} \Bigg(\frac{(-1)^{1/6} b^{1/3} \left(a^2+b^2\right)^{1/6} \text{Sec}[e+f x]^{4/3} \text{Sin}[e+f x]}{\sqrt{3}} +$$

$$\frac{2}{3} (-1)^{1/3} b^{2/3} \text{Sec}[e+f x]^{5/3} \text{Sin}[e+f x]\Bigg)\Bigg) \Big/ \Big(\left(a^2+b^2\right)^{1/3} +$$

$$(-1)^{1/6} \sqrt{3}\, b^{1/3} \left(a^2+b^2\right)^{1/6} \text{Sec}[e+f x]^{1/3} + (-1)^{1/3} b^{2/3} \text{Sec}[e+f x]^{2/3}\Big)\Bigg) +$$

$$\frac{1}{35 \left(a^2+b^2\right)^2 \text{Sec}[e+f x]^{5/3}} \Big(\Big(98 b^2 \left(6 a^6+51 a^4 b^2+29 a^2 b^4-16 b^6\right)$$

$$\text{AppellF1}\left[\frac{1}{6}, \frac{1}{2}, 1, \frac{7}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \text{Sec}[e+f x]^2}{a^2+b^2}\right]$$

$$\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^5\,\text{Tan}[e+f x]\Bigg)\Bigg/\Bigg(\left(-1+\text{Sec}[e+f x]^2\right)$$

$$\Bigg(7\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\Bigg(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)$$

$$\text{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Bigg)\text{Sec}[e+f x]^2\Bigg)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)^2\Bigg)+\Bigg(98\left(6\,a^6+51\,a^4\,b^2+29\,a^2\,b^4-16\,b^6\right)$$

$$\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]$$

$$\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^5\,\text{Tan}[e+f x]\Bigg)\Bigg/\Bigg(\left(-1+\text{Sec}[e+f x]^2\right)^2$$

$$\Bigg(7\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\Bigg(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)$$

$$\text{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Bigg)\text{Sec}[e+f x]^2\Bigg)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Bigg)-\Bigg(49\left(6\,a^6+51\,a^4\,b^2+29\,a^2\,b^4-16\,b^6\right)$$

$$\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\text{Sec}[e+f x]$$

$$\text{Tan}[e+f x]\Bigg)\Bigg/\Bigg(\sqrt{1-\text{Cos}[e+f x]^2}\ \left(-1+\text{Sec}[e+f x]^2\right)$$

$$\Bigg(7\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\Bigg(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)$$

$$\text{AppellF1}\Big[\frac{7}{6},\frac{3}{2},1,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Bigg)\text{Sec}[e+f x]^2\Bigg)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Bigg)-\Bigg(147\left(6\,a^6+51\,a^4\,b^2+29\,a^2\,b^4-16\,b^6\right)$$

$$\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]$$

$$\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^3\,\text{Tan}[e+f x]\Bigg)\Bigg/\Bigg(\left(-1+\text{Sec}[e+f x]^2\right)$$

$$\Bigg(7\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{1}{6},\frac{1}{2},1,\frac{7}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\Bigg(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\frac{1}{2},2,\frac{13}{6},\text{Sec}[e+f x]^2,\frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)$$

$$\text{AppellF1}\left[\frac{7}{6},\ \frac{3}{2},\ 1,\ \frac{13}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right)\text{Sec}[e+f x]^2\Big)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Big)+\frac{1}{\left(a^2-b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)^2}$$

$$2\,b^2\,\text{Sec}[e+f x]^2\,\Big(42\,a^3\,b+42\,a\,b^3+21\,a^4\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]-$$

$$21\,b^4\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]-77\,a\,b^3\,\text{Sec}[e+f x]^2-$$

$$21\,a^2\,b^2\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^3+56\,b^4\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^3+$$

$$\Big(26\,b^2\left(-3\,a^4+5\,a^2\,b^2+8\,b^4\right)\text{AppellF1}\left[\frac{7}{6},\ \frac{1}{2},\ 1,\ \frac{13}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\right]$$

$$\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^5\Big)\Big/\Big(\left(-1+\text{Sec}[e+f x]^2\right)\Big(13\left(a^2+b^2\right)\text{AppellF1}\Big[$$

$$\frac{7}{6},\ \frac{1}{2},\ 1,\ \frac{13}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+3\,\Big(2\,b^2\,\text{AppellF1}\Big[\frac{13}{6},\ \frac{1}{2},$$

$$2,\ \frac{19}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{13}{6},\ \frac{3}{2},\ 1,$$

$$\frac{19}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Big)\text{Sec}[e+f x]^2\Big)\Big)\Big)\,\text{Tan}[e+f x]-$$

$$\Big(49\left(6\,a^6+51\,a^4\,b^2+29\,a^2\,b^4-16\,b^6\right)\sqrt{1-\text{Cos}[e+f x]^2}\ \text{Sec}[e+f x]^3$$

$$\Big(\frac{1}{7\left(a^2+b^2\right)}2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\ \frac{1}{2},\ 2,\ \frac{13}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\,\text{Sec}[e+f x]^2$$

$$\text{Tan}[e+f x]+\frac{1}{7}\text{AppellF1}\Big[\frac{7}{6},\ \frac{3}{2},\ 1,\ \frac{13}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]$$

$$\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\Big)\Big)\Big/\Big(\left(-1+\text{Sec}[e+f x]^2\right)$$

$$\Big(7\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{1}{6},\ \frac{1}{2},\ 1,\ \frac{7}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$3\,\Big(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\ \frac{1}{2},\ 2,\ \frac{13}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)$$

$$\text{AppellF1}\Big[\frac{7}{6},\ \frac{3}{2},\ 1,\ \frac{13}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Big)\text{Sec}[e+f x]^2\Big)$$

$$\left(-a^2+b^2\left(-1+\text{Sec}[e+f x]^2\right)\right)\Big)+\Big(49\left(6\,a^6+51\,a^4\,b^2+29\,a^2\,b^4-16\,b^6\right)$$

$$\text{AppellF1}\Big[\frac{1}{6},\ \frac{1}{2},\ 1,\ \frac{7}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\sqrt{1-\text{Cos}[e+f x]^2}$$

$$\text{Sec}[e+f x]^3\,\Big(6\,\Big(2\,b^2\,\text{AppellF1}\Big[\frac{7}{6},\ \frac{1}{2},\ 2,\ \frac{13}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]+$$

$$\left(a^2+b^2\right)\text{AppellF1}\Big[\frac{7}{6},\ \frac{3}{2},\ 1,\ \frac{13}{6},\ \text{Sec}[e+f x]^2,\ \frac{b^2\,\text{Sec}[e+f x]^2}{a^2+b^2}\Big]\Big)$$

$$\text{Sec}[e+f x]^2 \,\text{Tan}[e+f x] + 7 \left(a^2+b^2\right) \left(\frac{1}{7 \left(a^2+b^2\right)} 2 b^2 \,\text{AppellF1}\left[\frac{7}{6}, \frac{1}{2}, 2, \frac{13}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \,\text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^2 \,\text{Tan}[e+f x] + \frac{1}{7} \text{AppellF1}\left[\frac{7}{6}, \frac{3}{2}, 1, \frac{13}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \,\text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^2 \,\text{Tan}[e+f x]\right) +$$

$$3 \,\text{Sec}[e+f x]^2 \left(2 b^2 \left(\frac{1}{13 \left(a^2+b^2\right)} 28 b^2 \,\text{AppellF1}\left[\frac{13}{6}, \frac{1}{2}, 3, \frac{19}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \,\text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^2 \,\text{Tan}[e+f x] + \frac{7}{13} \text{AppellF1}\left[\frac{13}{6}, \frac{3}{2}, 2, \frac{19}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \,\text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^2 \,\text{Tan}[e+f x]\right) + \left(a^2+b^2\right)\right.$$

$$\left.\left.\left.\left(\frac{1}{13 \left(a^2+b^2\right)} 14 b^2 \,\text{AppellF1}\left[\frac{13}{6}, \frac{3}{2}, 2, \frac{19}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \,\text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^2 \,\text{Tan}[e+f x] + \frac{21}{13} \text{AppellF1}\left[\frac{13}{6}, \frac{5}{2}, 1, \frac{19}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \,\text{Sec}[e+f x]^2}{a^2+b^2}\right] \text{Sec}[e+f x]^2 \,\text{Tan}[e+f x]\right)\right)\right)\right) \Big/ \left(\left(-1+\text{Sec}[e+f x]^2\right)\right.$$

$$\left(7 \left(a^2+b^2\right) \text{AppellF1}\left[\frac{1}{6}, \frac{1}{2}, 1, \frac{7}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \,\text{Sec}[e+f x]^2}{a^2+b^2}\right] + 3 \left(2 b^2 \,\text{AppellF1}\left[\frac{7}{6}, \frac{1}{2}, 2, \frac{13}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \,\text{Sec}[e+f x]^2}{a^2+b^2}\right] + \left(a^2+b^2\right) \text{AppellF1}\left[\frac{7}{6}, \frac{3}{2}, 1, \frac{13}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \,\text{Sec}[e+f x]^2}{a^2+b^2}\right]\right) \text{Sec}[e+f x]^2\right)^2$$

$$\left.\left(-a^2+b^2 \left(-1+\text{Sec}[e+f x]^2\right)\right)\right) + \frac{1}{a^2-b^2 \left(-1+\text{Sec}[e+f x]^2\right)}$$

$$\left(\frac{21 a^4 \,\text{Sin}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}} - \frac{21 b^4 \,\text{Sin}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}} - \frac{21 a^2 b^2 \,\text{Sec}[e+f x] \,\text{Tan}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}} + \frac{56 b^4 \,\text{Sec}[e+f x] \,\text{Tan}[e+f x]}{\sqrt{1-\text{Cos}[e+f x]^2}} + 21 a^4 \sqrt{1-\text{Cos}[e+f x]^2} \,\text{Sec}[e+f x] \,\text{Tan}[e+f x] -\right.$$

$$21 b^4 \sqrt{1-\text{Cos}[e+f x]^2} \,\text{Sec}[e+f x] \,\text{Tan}[e+f x] - 154 a b^3 \,\text{Sec}[e+f x]^2 \,\text{Tan}[e+f x] -$$

$$63 a^2 b^2 \sqrt{1-\text{Cos}[e+f x]^2} \,\text{Sec}[e+f x]^3 \,\text{Tan}[e+f x] +$$

$$168 b^4 \sqrt{1-\text{Cos}[e+f x]^2} \,\text{Sec}[e+f x]^3 \,\text{Tan}[e+f x] -$$

$$\left(52 b^2 \left(-3 a^4+5 a^2 b^2+8 b^4\right) \text{AppellF1}\left[\frac{7}{6}, \frac{1}{2}, 1, \frac{13}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \,\text{Sec}[e+f x]^2}{a^2+b^2}\right] \sqrt{1-\text{Cos}[e+f x]^2} \,\text{Sec}[e+f x]^7 \,\text{Tan}[e+f x]\right) \Big/ \left(\left(-1+\text{Sec}[e+f x]^2\right)^2\right.$$

$$\left(13 \left(a^2+b^2\right) \text{AppellF1}\left[\frac{7}{6}, \frac{1}{2}, 1, \frac{13}{6}, \text{Sec}[e+f x]^2, \frac{b^2 \,\text{Sec}[e+f x]^2}{a^2+b^2}\right] +\right.$$

$$3\left(2b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$

$$\left.\left.\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\text{Sec}[e+fx]^2\right)\right)+$$

$$\left(26b^2\left(-3a^4+5a^2b^2+8b^4\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right.$$

$$\left.\text{Sec}[e+fx]^3\,\text{Tan}[e+fx]\right)\Big/\left(\sqrt{1-\text{Cos}[e+fx]^2}\left(-1+\text{Sec}[e+fx]^2\right)\right.$$

$$\left(13\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\right.$$

$$3\left(2b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$

$$\left.\left.\left.\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\text{Sec}[e+fx]^2\right)\right)+$$

$$\left(130b^2\left(-3a^4+5a^2b^2+8b^4\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right.$$

$$\left.\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^5\,\text{Tan}[e+fx]\right)\Big/\left(\left(-1+\text{Sec}[e+fx]^2\right)\right.$$

$$\left(13\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\right.$$

$$3\left(2b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$

$$\left.\left.\left.\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\text{Sec}[e+fx]^2\right)\right)+$$

$$\left(26b^2\left(-3a^4+5a^2b^2+8b^4\right)\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^5\left(\frac{1}{13\left(a^2+b^2\right)}\right.\right.$$

$$14b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\text{Sec}[e+fx]^2$$

$$\text{Tan}[e+fx]+\frac{7}{13}\,\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]$$

$$\left.\left.\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]\right)\right)\Big/\left(\left(-1+\text{Sec}[e+fx]^2\right)\right.$$

$$\left(13\left(a^2+b^2\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\right.$$

$$3\left(2b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]+\left(a^2+b^2\right)\right.$$

$$\left.\left.\left.\text{AppellF1}\left[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\text{Sec}[e+fx]^2,\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\right)\text{Sec}[e+fx]^2\right)\right)-$$

$$\left(26b^2\left(-3a^4+5a^2b^2+8b^4\right)\text{AppellF1}\left[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\text{Sec}[e+fx]^2,\right.\right.$$

$$\left.\frac{b^2\,\text{Sec}[e+fx]^2}{a^2+b^2}\right]\sqrt{1-\text{Cos}[e+fx]^2}\,\text{Sec}[e+fx]^5\left(6\left(2b^2\,\text{AppellF1}\left[\frac{13}{6},\frac{1}{2},\right.\right.\right.$$

$$2,\frac{19}{6},\mathrm{Sec}[e+fx]^2,\frac{b^2\,\mathrm{Sec}[e+fx]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)\mathrm{AppellF1}\Big[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\mathrm{Sec}[e+fx]^2,\frac{b^2\,\mathrm{Sec}[e+fx]^2}{a^2+b^2}\Big]\Bigg)\,\mathrm{Sec}[e+fx]^2\,\mathrm{Tan}[e+fx]+$$

$$13\left(a^2+b^2\right)\Bigg(\frac{1}{13\left(a^2+b^2\right)}14\,b^2\,\mathrm{AppellF1}\Big[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\mathrm{Sec}[e+fx]^2,\frac{b^2\,\mathrm{Sec}[e+fx]^2}{a^2+b^2}\Big]\,\mathrm{Sec}[e+fx]^2\,\mathrm{Tan}[e+fx]+\frac{7}{13}\,\mathrm{AppellF1}\Big[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\mathrm{Sec}[e+fx]^2,\frac{b^2\,\mathrm{Sec}[e+fx]^2}{a^2+b^2}\Big]\,\mathrm{Sec}[e+fx]^2\,\mathrm{Tan}[e+fx]\Bigg)+3\,\mathrm{Sec}[e+fx]^2$$

$$\Bigg(2\,b^2\Bigg(\Bigg(52\,b^2\,\mathrm{AppellF1}\Big[\frac{19}{6},\frac{1}{2},3,\frac{25}{6},\mathrm{Sec}[e+fx]^2,\frac{b^2\,\mathrm{Sec}[e+fx]^2}{a^2+b^2}\Big]\,\mathrm{Sec}[e+fx]^2\,\mathrm{Tan}[e+fx]\Bigg)\Big/\left(19\left(a^2+b^2\right)\right)+\frac{13}{19}\,\mathrm{AppellF1}\Big[\frac{19}{6},\frac{3}{2},2,\frac{25}{6},\mathrm{Sec}[e+fx]^2,\frac{b^2\,\mathrm{Sec}[e+fx]^2}{a^2+b^2}\Big]\,\mathrm{Sec}[e+fx]^2\,\mathrm{Tan}[e+fx]\Bigg)+$$

$$\left(a^2+b^2\right)\Bigg(\Bigg(26\,b^2\,\mathrm{AppellF1}\Big[\frac{19}{6},\frac{3}{2},2,\frac{25}{6},\mathrm{Sec}[e+fx]^2,\frac{b^2\,\mathrm{Sec}[e+fx]^2}{a^2+b^2}\Big]\,\mathrm{Sec}[e+fx]^2\,\mathrm{Tan}[e+fx]\Bigg)\Big/\left(19\left(a^2+b^2\right)\right)+\frac{39}{19}\,\mathrm{AppellF1}\Big[\frac{19}{6},\frac{5}{2},1,\frac{25}{6},\mathrm{Sec}[e+fx]^2,\frac{b^2\,\mathrm{Sec}[e+fx]^2}{a^2+b^2}\Big]\,\mathrm{Sec}[e+fx]^2\,\mathrm{Tan}[e+fx]\Bigg)\Bigg)\Bigg)\Bigg)\Big/$$

$$\Bigg(\left(-1+\mathrm{Sec}[e+fx]^2\right)\Bigg(13\left(a^2+b^2\right)\mathrm{AppellF1}\Big[\frac{7}{6},\frac{1}{2},1,\frac{13}{6},\mathrm{Sec}[e+fx]^2,\frac{b^2\,\mathrm{Sec}[e+fx]^2}{a^2+b^2}\Big]+3\Bigg(2\,b^2\,\mathrm{AppellF1}\Big[\frac{13}{6},\frac{1}{2},2,\frac{19}{6},\mathrm{Sec}[e+fx]^2,\frac{b^2\,\mathrm{Sec}[e+fx]^2}{a^2+b^2}\Big]+\left(a^2+b^2\right)\mathrm{AppellF1}\Big[\frac{13}{6},\frac{3}{2},1,\frac{19}{6},\mathrm{Sec}[e+fx]^2,\frac{b^2\,\mathrm{Sec}[e+fx]^2}{a^2+b^2}\Big]\Bigg)\,\mathrm{Sec}[e+fx]^2\Bigg)^2\Bigg)\Bigg)\Bigg)\Bigg)$$

Problem 641: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int(d\,\mathrm{Sec}[e+fx])^m\,(a+b\,\mathrm{Tan}[e+fx])^2\,dx$$

Optimal (type 5, 147 leaves, 4 steps):

$$\frac{a\,b\,(2+m)\,(d\,\mathrm{Sec}[e+f\,x])^m}{f\,m\,(1+m)}+\left(d\,\left(b^2-a^2\,(1+m)\right)\,\mathrm{Hypergeometric2F1}\left[\frac{1}{2},\frac{1-m}{2},\frac{3-m}{2},\mathrm{Cos}[e+f\,x]^2\right]\,(d\,\mathrm{Sec}[e+f\,x])^{-1+m}\,\mathrm{Sin}[e+f\,x]\right)\Big/\left(f\,(1-m)\,(1+m)\,\sqrt{\mathrm{Sin}[e+f\,x]^2}\right)+\frac{b\,(d\,\mathrm{Sec}[e+f\,x])^m\,(a+b\,\mathrm{Tan}[e+f\,x])}{f\,(1+m)}$$

Result (type 6, 14 694 leaves) :

$$\Bigg(\mathrm{Sec}[e+f\,x]^{-2-m}\,(d\,\mathrm{Sec}[e+f\,x])^m\,\left(a^2\,\mathrm{Sec}[e+f\,x]^m+2\,a\,b\,\mathrm{Sec}[e+f\,x]^{1+m}\,\mathrm{Sin}[e+f\,x]+b^2\,\mathrm{Sec}[e+f\,x]^{2+m}\,\mathrm{Sin}[e+f\,x]^2\right)$$

$$\Bigg(\Bigg(3\,a^2\,\mathrm{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right]\,\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]$$

$$\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}\right)^{-2+m}\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right)^{-1+m}\Bigg)\Big/\Bigg(\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right)^2$$

$$\Bigg(3\,\mathrm{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right]+2\,\Bigg((-1+m)$$

$$\mathrm{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right]+m\,\mathrm{AppellF1}\Big[\frac{3}{2},$$

$$1+m,1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\Big]\Bigg)\,\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(3\,b^2\,\mathrm{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right]\,\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]$$

$$\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}\right)^{-2+m}\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right)^{-1+m}\Bigg)\Big/\Bigg(\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right)^2$$

$$\Bigg(3\,\mathrm{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right]+2\,\Bigg((-1+m)$$

$$\mathrm{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right]+m\,\mathrm{AppellF1}\Big[\frac{3}{2},$$

$$1+m,1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\Big]\Bigg)\,\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(b^2\,\mathrm{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right]\,\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]$$

$$\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2}\right)^{-1+m}\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right)^m\Bigg)\Big/\Bigg(\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right)^2$$

$$\Bigg(\mathrm{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right]+\frac{2}{3}\,\Bigg(m\,\mathrm{AppellF1}\Big[\frac{3}{2},$$

$$1+m,\ 1-m,\ \frac{5}{2},\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]+(1+m)\ \mathrm{AppellF1}\Big[\frac{3}{2},\ 2+ m,\ -m,\ \frac{5}{2},\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]\Big)\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big)\Big)+$$

$$\Bigg(2\,b^2\,\mathrm{AppellF1}\Big[\frac{1}{2},\ 2+m,\ -m,\ \frac{3}{2},\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2}\right)^m\left(1+\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^m\Bigg)\Big/$$

$$\Bigg(\left(-1+\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^2\Big(\mathrm{AppellF1}\Big[\frac{1}{2},\ 2+m,\ -m,\ \frac{3}{2},\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]+\frac{2}{3}\Big(m\,\mathrm{AppellF1}\Big[\frac{3}{2},\ 2+m,\ 1-m,\ \frac{5}{2},\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]+(2+m)\ \mathrm{AppellF1}\Big[\frac{3}{2},\ 3+m,\ -m,\ \frac{5}{2},\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]\Big)\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big)\Bigg)+$$

$$\Bigg(2\,a\,b\,\mathrm{AppellF1}\Big[1,\ m,\ 1-m,\ 2,\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2}\right)^{-2+m}\left(1+\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^{-1+m}\Bigg)\Big/\Bigg(\left(-1+\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^2$$

$$\Big(2\,\mathrm{AppellF1}\Big[1,\ m,\ 1-m,\ 2,\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]+\Big((-1+m)\ \mathrm{AppellF1}\Big[2,\ m,\ 2-m,\ 3,\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]+m\,\mathrm{AppellF1}\Big[2,\ 1+m,\ 1-m,\ 3,\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]\Big)\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big)\Bigg)+$$

$$\Bigg(2\,a\,b\,\mathrm{AppellF1}\Big[1,\ 1+m,\ -m,\ 2,\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2}\right)^{-1+m}\left(1+\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^m\Bigg)\Big/\Bigg(\left(-1+\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^2$$

$$\Big(2\,\mathrm{AppellF1}\Big[1,\ 1+m,\ -m,\ 2,\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]+\Big(m\,\mathrm{AppellF1}\Big[2,\ 1+m,\ 1-m,\ 3,\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]+(1+m)\ \mathrm{AppellF1}\Big[2,\ 2+m,\ -m,\ 3,\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]\Big)$$

$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)\right)\right)\left(a+b\,\text{Tan}[e+f\,x]\right)^2\right)\Big/\left(f\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)^2\right.$$

$$\left(\left(\left(3\,a^2\left(-1+m\right)\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\right.\right.\right.$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)^{-2+m}$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)^{-2+m}\right)\Big/\left(\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)^2\right.$$

$$\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+2\left(\left(-1+m\right)\right.\right.$$

$$\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},\right.$$

$$\left.\left.\left.1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)\right)-$$

$$\left(3\,b^2\left(-1+m\right)\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)^{-2+m}$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)^{-2+m}\right)\Big/\left(\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)^2\right.$$

$$\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+2\left(\left(-1+m\right)\right.\right.$$

$$\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},\right.$$

$$\left.\left.\left.1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)\right)-$$

$$\left(6\,a^2\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)^{-2+m}$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)^{-1+m}\right)\Big/\left(\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)^3\right.$$

$$\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+2\left(\left(-1+m\right)\right.\right.$$

$$\text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big) +$$

$$\Big(6\,b^2\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-2+m}$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^{-1+m}\Big)\Big/\Big(\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^3$$

$$\Big(3\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2\Big((-1+m)$$

$$\text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big) +$$

$$\Big(3\,a^2\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-2+m}$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^{-1+m}\Big)\Big/\Big(2\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2$$

$$\Big(3\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2\Big((-1+m)$$

$$\text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big) -$$

$$\Big(3\,b^2\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-2+m}$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^{-1+m}\Big)\Big/\Big(2\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2$$

$$\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)+$$

$$\left(3\,a^2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]\left(-\frac{1}{3}(1-m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3}m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-2+m}\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^{-1+m}\right)\Big/\left(\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right.$$

$$\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)-$$

$$\left(3\,b^2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]\left(-\frac{1}{3}(1-m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3}m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-2+m}\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^{-1+m}\right)\Big/\left(\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right.$$

$$\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)+$$

$$\left(3\,a^2\,(-2+m)\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-1+m}$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{-1+m}\Bigg)\Bigg/\left(\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right.$$

$$\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left((-1+m)\right.\right.$$

$$\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},\right.$$

$$\left.\left.\left.1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)-$$

$$\left(3\,b^2(-2+m)\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-1+m}$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{-1+m}\Bigg)\Bigg/\left(\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right.$$

$$\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left((-1+m)\right.\right.$$

$$\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},\right.$$

$$\left.\left.\left.1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)-$$

$$\left(b^2\,m\,\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-1+m}$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{-1+m}\Bigg)\Bigg/\left(\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right.$$

$$\left(\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$(1+m)\,\text{AppellF1}\left[\frac{3}{2},2+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+$$

$$\left(2\,b^2\,\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-1+m}$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m\right) \Big/ \left(\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^3\right.$$

$$\left(\text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \right.$$

$$\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \right.$$

$$(1+m)\,\text{AppellF1}\left[\frac{3}{2}, 2+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.\left.\left.\left. -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right) -$$

$$\left(b^2\,\text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-1+m}$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m\right) \Big/ \left(2\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right.$$

$$\left(\text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \right.$$

$$\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \right.$$

$$\left.(1+m)\,\text{AppellF1}\left[\frac{3}{2}, 2+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right) - \left(b^2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right.$$

$$\left(\frac{1}{3} m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \text{Tan}\left[\frac{1}{2}(e+fx)\right] + \frac{1}{3}(1+m)\,\text{AppellF1}\left[\frac{3}{2}, 2+m, -m, \frac{5}{2},\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)$$

$$\left.\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-1+m} \left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m\right) \Big/ \left(\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right.$$

$$\left(\text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \right.$$

$$\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \right.$$

$$\left(1+m\right) \text{AppellF1}\left[\frac{3}{2}, 2+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Bigg)\Bigg) -$$

$$\Bigg(b^2 \left(-1+m\right) \text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}\right)^m$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^m\Bigg) \Big/ \left(\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^2\right.$$

$$\Bigg(\text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] +$$

$$\frac{2}{3}\Bigg(m\, \text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] +$$

$$\left(1+m\right) \text{AppellF1}\left[\frac{3}{2}, 2+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Bigg)\Bigg) +$$

$$\Bigg(2 b^2 m\, \text{AppellF1}\left[\frac{1}{2}, 2+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}\right)^m$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^{-1+m}\Bigg) \Big/ \left(\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^2\right.$$

$$\Bigg(\text{AppellF1}\left[\frac{1}{2}, 2+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] +$$

$$\frac{2}{3}\Bigg(m\, \text{AppellF1}\left[\frac{3}{2}, 2+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] +$$

$$\left(2+m\right) \text{AppellF1}\left[\frac{3}{2}, 3+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Bigg)\Bigg) -$$

$$\Bigg(4 b^2 \text{AppellF1}\left[\frac{1}{2}, 2+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}\right)^m$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^m\right)\Big/\left(\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^3\right.$$

$$\left(\text{AppellF1}\left[\frac{1}{2},\,2+m,\,-m,\,\frac{3}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2},\,2+m,\,1-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$(2+m)\,\text{AppellF1}\left[\frac{3}{2},\,3+m,\,-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$

$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right)+$$

$$\left(b^2\,\text{AppellF1}\left[\frac{1}{2},\,2+m,\,-m,\,\frac{3}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^m$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^m\right)\Big/\left(\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\right.$$

$$\left(\text{AppellF1}\left[\frac{1}{2},\,2+m,\,-m,\,\frac{3}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2},\,2+m,\,1-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$\left.(2+m)\,\text{AppellF1}\left[\frac{3}{2},\,3+m,\,-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right)+\left(2\,b^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right.$$

$$\left(\frac{1}{3}\,m\,\text{AppellF1}\left[\frac{3}{2},\,2+m,\,1-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+\frac{1}{3}\,(2+m)\,\text{AppellF1}\left[\frac{3}{2},\,3+m,\,-m,\,\frac{5}{2},\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)$$

$$\left.\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^m\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^m\right)\Big/\left(\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\right.$$

$$\left(\text{AppellF1}\left[\frac{1}{2},\,2+m,\,-m,\,\frac{3}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2},\,2+m,\,1-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$(2+m)\,\text{AppellF1}\left[\frac{3}{2},\,3+m,\,-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$

$$-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big)+$$

$$\Bigg(2\,b^2\,m\,\mathrm{AppellF1}\left[\frac{1}{2},2+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{1+m}$$

$$\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m\Bigg)\Big/\Bigg(\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2$$

$$\Bigg(\mathrm{AppellF1}\left[\frac{1}{2},2+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$\frac{2}{3}\Bigg(m\,\mathrm{AppellF1}\left[\frac{3}{2},2+m,1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$(2+m)\,\mathrm{AppellF1}\Big[\frac{3}{2},3+m,-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$

$$-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Bigg)\,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(2\,a\,b\,(-1+m)\,\mathrm{AppellF1}\left[1,m,1-m,2,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^3\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-2+m}$$

$$\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^{-2+m}\Bigg)\Big/\Bigg(\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2$$

$$\Bigg(2\,\mathrm{AppellF1}\left[1,m,1-m,2,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$\Bigg((-1+m)\,\mathrm{AppellF1}\left[2,m,2-m,3,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+m\,\mathrm{AppellF1}\Big[$$

$$2,1+m,1-m,3,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Bigg)\,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(4\,a\,b\,\mathrm{AppellF1}\left[1,m,1-m,2,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^3\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-2+m}$$

$$\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^{-1+m}\Bigg)\Big/\Bigg(\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^3$$

$$\Bigg(2\,\text{AppellF1}\Big[1,m,1-m,2,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]+\Big((-1+m)\,\text{AppellF1}\Big[2,m,2-m,3,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]+m\,\text{AppellF1}\Big[2,1+m,1-m,3,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\Big)\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Bigg)+$$

$$\Bigg(2\,a\,b\,\text{AppellF1}\Big[1,m,1-m,2,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\,\text{Sec}\Big[\frac{1}{2}(e+fx)\Big]^2\,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]\left(\frac{1}{1-\text{Tan}\big[\frac{1}{2}(e+fx)\big]^2}\right)^{-2+m}\Big(1+\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big)^{-1+m}\Bigg)\Bigg/\Bigg(\Big(-1+\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big)^2$$

$$\Bigg(2\,\text{AppellF1}\Big[1,m,1-m,2,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]+\Big((-1+m)\,\text{AppellF1}\Big[2,m,2-m,3,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]+m\,\text{AppellF1}\Big[2,1+m,1-m,3,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\Big)\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Bigg)\Bigg)+$$

$$\Bigg(2\,a\,b\,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big(-\frac{1}{2}(1-m)\,\text{AppellF1}\Big[2,m,2-m,3,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\,\text{Sec}\Big[\frac{1}{2}(e+fx)\Big]^2\,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]+\frac{1}{2}m\,\text{AppellF1}\Big[2,1+m,1-m,3,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\,\text{Sec}\Big[\frac{1}{2}(e+fx)\Big]^2\,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]\Big)\left(\frac{1}{1-\text{Tan}\big[\frac{1}{2}(e+fx)\big]^2}\right)^{-2+m}\Big(1+\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big)^{-1+m}\Bigg)\Bigg/\Bigg(\Big(-1+\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big)^2$$

$$\Bigg(2\,\text{AppellF1}\Big[1,m,1-m,2,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]+\Big((-1+m)\,\text{AppellF1}\Big[2,m,2-m,3,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]+m\,\text{AppellF1}\Big[2,1+m,1-m,3,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\Big)\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Bigg)\Bigg)+$$

$$\Bigg(2\,a\,b\,(-2+m)\,\text{AppellF1}\Big[1,m,1-m,2,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\,\text{Sec}\Big[\frac{1}{2}(e+fx)\Big]^2\,\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^3\left(\frac{1}{1-\text{Tan}\big[\frac{1}{2}(e+fx)\big]^2}\right)^{-1+m}$$

$$\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{-1+m}\right)\Big/\left(\left(-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\right.$$

$$\left(2\,\mathrm{AppellF1}\left[1,\,m,\,1-m,\,2,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$\left(\left(-1+m\right)\,\mathrm{AppellF1}\left[2,\,m,\,2-m,\,3,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+m\,\mathrm{AppellF1}\left[\right.\right.$$

$$\left.\left.\left.2,\,1+m,\,1-m,\,3,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right)+$$

$$\left(2\,a\,b\,m\,\mathrm{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right.$$

$$\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^3\,\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{-1+m}$$

$$\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{-1+m}\right)\Big/\left(\left(-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\right.$$

$$\left(2\,\mathrm{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$\left(m\,\mathrm{AppellF1}\left[2,\,1+m,\,1-m,\,3,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$\left(1+m\right)\,\mathrm{AppellF1}\left[2,\,2+m,\,-m,\,3,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$

$$\left.\left.\left.\left.-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right)-$$

$$\left(4\,a\,b\,\mathrm{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right.$$

$$\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^3\,\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{-1+m}$$

$$\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{m}\right)\Big/\left(\left(-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^3\right.$$

$$\left(2\,\mathrm{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$\left(m\,\mathrm{AppellF1}\left[2,\,1+m,\,1-m,\,3,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$\left(1+m\right)\,\mathrm{AppellF1}\left[2,\,2+m,\,-m,\,3,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$

$$\left.\left.\left.\left.-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right)+$$

$$\left(2\,a\,b\,\text{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\,\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{-1+m}$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^m\right)\Big/\left(\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\right.$$

$$\left(2\,\text{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$\left(m\,\text{AppellF1}\left[2,\,1+m,\,1-m,\,3,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$\left.(1+m)\,\text{AppellF1}\left[2,\,2+m,\,-m,\,3,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right)+\left(2\,a\,b\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right.$$

$$\left(\frac{1}{2}\,m\,\text{AppellF1}\left[2,\,1+m,\,1-m,\,3,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+\frac{1}{2}\,(1+m)\,\text{AppellF1}\left[2,\,2+m,\,-m,\,3,\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)$$

$$\left.\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{-1+m}\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^m\right)\Big/\left(\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\right.$$

$$\left(2\,\text{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$\left(m\,\text{AppellF1}\left[2,\,1+m,\,1-m,\,3,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$(1+m)\,\text{AppellF1}\left[2,\,2+m,\,-m,\,3,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$

$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right)+$$

$$\left(2\,a\,b\,(-1+m)\,\text{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^3\,\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{m}$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^m\right)\Big/\left(\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\right.$$

$$\left(2\,\text{AppellF1}\left[1,1+m,-m,2,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\left(m\,\text{AppellF1}\left[2,1+m,1-m,3,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+(1+m)\,\text{AppellF1}\left[2,2+m,-m,3,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)-$$

$$\left(3\,a^2\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-2+m}\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{-1+m}$$

$$\left(2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$

$$3\left(-\frac{1}{3}(1-m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{3}m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$

$$2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left((-1+m)\left(-\frac{3}{5}(2-m)\,\text{AppellF1}\left[\frac{5}{2},m,3-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\right.\right.$$

$$\left.\frac{3}{5}m\,\text{AppellF1}\left[\frac{5}{2},1+m,2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+m\left(-\frac{3}{5}(1-m)\,\text{AppellF1}\left[\frac{5}{2},1+m,2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right.$$

$$\left.\left.\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{3}{5}(1+m)\,\text{AppellF1}\left[\frac{5}{2},2+m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\Big/$$

$$\left(\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\right.\right.\right.$$

$$\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Big)^2\Big)+$$

$$\Bigg(3\,b^2\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}\right)^{-2+m}\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^{-1+m}$$

$$\Bigg(2\left(\left(-1+m\right)\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\right)\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+$$

$$3\left(-\frac{1}{3}\left(1-m\right)\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+\frac{1}{3}m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)+$$

$$2\,\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Bigg(\left(-1+m\right)\left(-\frac{3}{5}\left(2-m\right)\text{AppellF1}\left[\frac{5}{2},m,3-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+\frac{3}{5}m\,\text{AppellF1}\left[\frac{5}{2},1+m,2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)+m\left(-\frac{3}{5}\left(1-m\right)\text{AppellF1}\left[\frac{5}{2},1+m,2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+\frac{3}{5}\left(1+m\right)\text{AppellF1}\left[\frac{5}{2},2+m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Bigg(\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^2\Bigg(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]+2\left(\left(-1+m\right)\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Bigg)^2\Bigg)+$$

$$\left(b^2 \text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Tan}\left[\frac{1}{2}(e+f x)\right] \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-1+m} \left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^m \left(\frac{1}{3} m \text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] + \frac{1}{3}(1+m) \text{AppellF1}\left[\frac{3}{2}, 2+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] + \frac{2}{3}\left(m \text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + (1+m) \text{AppellF1}\left[\frac{3}{2}, 2+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] + \frac{2}{3} \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2 \left(m \left(-\frac{3}{5}(1-m) \text{AppellF1}\left[\frac{5}{2}, 1+m, 2-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] + \frac{3}{5}(1+m) \text{AppellF1}\left[\frac{5}{2}, 2+m, 1-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right) + (1+m) \left(\frac{3}{5} m \text{AppellF1}\left[\frac{5}{2}, 2+m, 1-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] + \frac{3}{5}(2+m) \text{AppellF1}\left[\frac{5}{2}, 3+m, -m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right) \Big/ \left(\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2 \left(\text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \frac{2}{3}\left(m \text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + (1+m) \text{AppellF1}\left[\frac{3}{2}, 2+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right) -$$

$$\left(2 b^2 \text{AppellF1}\left[\frac{1}{2}, 2+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Tan}\left[\frac{1}{2}(e+f x)\right] \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^m \left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^m\right.$$

$$\left(\frac{1}{3} m \,\text{AppellF1}\left[\frac{3}{2}, 2+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] + \frac{1}{3}(2+m) \,\text{AppellF1}\left[\frac{3}{2}, 3+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] + \frac{2}{3}\left(m \,\text{AppellF1}\left[\frac{3}{2}, 2+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + (2+m) \,\text{AppellF1}\left[\frac{3}{2}, 3+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] + \frac{2}{3} \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2 \left(m\left(-\frac{3}{5}(1-m) \,\text{AppellF1}\left[\frac{5}{2}, 2+m, 2-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] + \frac{3}{5}(2+m) \,\text{AppellF1}\left[\frac{5}{2}, 3+m, 1-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right) + (2+m)\left(\frac{3}{5} m \,\text{AppellF1}\left[\frac{5}{2}, 3+m, 1-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] + \frac{3}{5}(3+m) \,\text{AppellF1}\left[\frac{5}{2}, 4+m, -m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right) \Big/ \left(\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2 \left(\text{AppellF1}\left[\frac{1}{2}, 2+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \frac{2}{3}\left(m \,\text{AppellF1}\left[\frac{3}{2}, 2+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + (2+m) \,\text{AppellF1}\left[\frac{3}{2}, 3+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right) -$$

$$\left(2 a b \,\text{AppellF1}\left[1, m, 1-m, 2, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-2+m} \left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{-1+m} \left(\left(\left((-1+m) \,\text{AppellF1}\left[2, m, 2-m, 3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + m \,\text{AppellF1}\left[2, 1+m, 1-m, 3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\right.\right.\right.$$

$$\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right] + 2\left(-\frac{1}{2}(1-m)\,\mathrm{AppellF1}\left[2, m, 2-m, 3,\right.\right.$$

$$\left.\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right] +$$

$$\frac{1}{2} m\,\mathrm{AppellF1}\left[2, 1+m, 1-m, 3, \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\left.\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right) + \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2$$

$$\left(\left(-1+m\right)\left(-\frac{2}{3}(2-m)\,\mathrm{AppellF1}\left[3, m, 3-m, 4, \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.\right.$$

$$\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right] + \frac{2}{3} m\,\mathrm{AppellF1}\left[3, 1+m, 2-m, 4,\right.$$

$$\left.\left.\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right) +$$

$$m\left(-\frac{2}{3}(1-m)\,\mathrm{AppellF1}\left[3, 1+m, 2-m, 4, \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.$$

$$\left.-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right] +$$

$$\frac{2}{3}(1+m)\,\mathrm{AppellF1}\left[3, 2+m, 1-m, 4, \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\left.\left.\left.\left.\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\right) \Big/ \left(\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right.$$

$$\left(2\,\mathrm{AppellF1}\left[1, m, 1-m, 2, \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \left(\left(-1+m\right)\right.\right.$$

$$\mathrm{AppellF1}\left[2, m, 2-m, 3, \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + m\,\mathrm{AppellF1}\left[2,\right.$$

$$\left.\left.\left.\left.1+m, 1-m, 3, \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right) -$$

$$\left(2\,a\,b\,\mathrm{AppellF1}\left[1, 1+m, -m, 2, \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$

$$\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2 \left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-1+m}$$

$$\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m$$

$$\left(\left(m\,\mathrm{AppellF1}\left[2, 1+m, 1-m, 3, \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] +\right.\right.$$

$$\left.(1+m)\,\mathrm{AppellF1}\left[2, 2+m, -m, 3, \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)$$

$$\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right] +$$

$$2\left(\frac{1}{2} m\,\mathrm{AppellF1}\left[2, 1+m, 1-m, 3, \mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{2}(1+m)\,\text{AppellF1}\left[2,2+m,-m,3,\right.$$
$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left(m\left(-\frac{2}{3}(1-m)\,\text{AppellF1}\left[3,1+m,2-m,4,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$
$$\frac{2}{3}(1+m)\,\text{AppellF1}\left[3,2+m,1-m,4,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$
$$\left.\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+(1+m)\left(\frac{2}{3}m\,\text{AppellF1}\left[3,2+m,1-m,4,\right.\right.$$
$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$
$$\frac{2}{3}(2+m)\,\text{AppellF1}\left[3,3+m,-m,4,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$
$$\left.\left.\left.\left.\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\Big/\left(\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right.$$
$$\left(2\,\text{AppellF1}\left[1,1+m,-m,2,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\left(m\,\text{AppellF1}\left[\right.\right.\right.$$
$$\left.2,1+m,1-m,3,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+(1+m)\,\text{AppellF1}\left[2,\right.$$
$$\left.\left.\left.\left.2+m,-m,3,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right)\right)$$

Problem 642: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int (d\,\text{Sec}[e+f x])^m\,(a+b\,\text{Tan}[e+f x])\,dx$$

Optimal (type 5, 93 leaves, 3 steps):

$$\frac{b\,(d\,\text{Sec}[e+f x])^m}{f m}-$$
$$\left(a\,d\,\text{Hypergeometric2F1}\left[\frac{1}{2},\frac{1-m}{2},\frac{3-m}{2},\text{Cos}[e+f x]^2\right](d\,\text{Sec}[e+f x])^{-1+m}\,\text{Sin}[e+f x]\right)\Big/$$
$$\left(f\,(1-m)\sqrt{\text{Sin}[e+f x]^2}\right)$$

Result (type 6, 7252 leaves):

$$\left(2\,\text{Sec}[e+f x]^{-1-m}\,(d\,\text{Sec}[e+f x])^m\,\left(a\,\text{Sec}[e+f x]^m+b\,\text{Sec}[e+f x]^{1+m}\,\text{Sin}[e+f x]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right.$$

$$\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^m \left(\left(3\,a\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.\right.$$

$$\left.\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\Big/\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right.$$

$$\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left((-1+m)\right.\right.$$

$$\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},\right.$$

$$\left.\left.\left.1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+$$

$$b\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(\left(\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.\right.$$

$$\left.\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\Big/\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right.$$

$$\left(2\,\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$\left((-1+m)\,\text{AppellF1}\left[2,m,2-m,3,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$m\,\text{AppellF1}\left[2,1+m,1-m,3,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)-$$

$$\text{AppellF1}\left[1,1+m,-m,2,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Big/$$

$$\left(2\,\text{AppellF1}\left[1,1+m,-m,2,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\left(m\,\text{AppellF1}\left[2,\right.\right.\right.$$

$$1+m,1-m,3,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+(1+m)\,\text{AppellF1}\left[2,\right.$$

$$\left.\left.\left.2+m,-m,3,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)$$

$$\left.(a+b\,\text{Tan}[e+f x])\right)\Big/\left(f\left(a\,\text{Cos}[e+f x]+b\,\text{Sin}[e+f x]\right)\right.$$

$$\left(-1+\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)$$

$$\left(-\frac{1}{\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2}\,2\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^m\right.$$

$$\left(\left(3\,a\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.\right.$$

$$\left.\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\Big/\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\right.\right.\right.$$

$$\frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big] + 2\,\Big(\big(-1+m\big)\,\text{AppellF1}\Big[\frac{3}{2}, m,$$

$$2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big] + m\,\text{AppellF1}\Big[\frac{3}{2}, 1+m,$$

$$1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big) +$$

$$b\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\,\Big(\Big(\text{AppellF1}\Big[1, m, 1-m, 2, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]$$

$$\Big(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)\Big/\Big(\Big(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\,\Big(2\,\text{AppellF1}\Big[1, m, 1-m, 2,$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big] + \Big(\big(-1+m\big)\,\text{AppellF1}\Big[2, m, 2-m,$$

$$3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big] + m\,\text{AppellF1}\Big[2, 1+m, 1-m,$$

$$3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big) -$$

$$\text{AppellF1}\Big[1, 1+m, -m, 2, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big/$$

$$\Big(2\,\text{AppellF1}\Big[1, 1+m, -m, 2, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big] +$$

$$\Big(m\,\text{AppellF1}\Big[2, 1+m, 1-m, 3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big] +$$

$$\big(1+m\big)\,\text{AppellF1}\Big[2, 2+m, -m, 3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)\Big) +$$

$$\frac{1}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\,\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^m$$

$$\Big(\Big(3\,a\,\text{AppellF1}\Big[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]$$

$$\Big(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)\Big/\Big(\Big(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\,\Big(3\,\text{AppellF1}\Big[\frac{1}{2}, m, 1-m,$$

$$\frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big] + 2\,\Big(\big(-1+m\big)\,\text{AppellF1}\Big[\frac{3}{2}, m,$$

$$2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big] + m\,\text{AppellF1}\Big[\frac{3}{2}, 1+m,$$

$$1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big) +$$

$$b\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\,\Big(\Big(\text{AppellF1}\Big[1, m, 1-m, 2, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]$$

$$\Big(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)\Big/\Big(\Big(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\,\Big(2\,\text{AppellF1}\Big[1, m, 1-m, 2,$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big] + \Big(\big(-1+m\big)\,\text{AppellF1}\Big[2, m, 2-m,$$

$$3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big] + m\,\text{AppellF1}\Big[2, 1+m, 1-m,$$

$$3,\ \mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\ \mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)-$$

$$\mathrm{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\Big/$$

$$\Big(2\,\mathrm{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$\Big(m\,\mathrm{AppellF1}\left[2,\,1+m,\,1-m,\,3,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$(1+m)\,\mathrm{AppellF1}\Big[2,\,2+m,\,-m,\,3,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

$$-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Big)\ \mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)\Big)+$$

$$\frac{1}{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\,2\,m\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\,\left(\frac{1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{1-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{-1+m}$$

$$\left(\frac{\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{1-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}+\right.$$

$$\left.\frac{\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)}{\left(1-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2}\right)$$

$$\Big(\Big(3\,a\,\mathrm{AppellF1}\left[\frac{1}{2},\,m,\,1-m,\,\frac{3}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\left(-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\Big)\Big/\Big(\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)$$

$$\Big(3\,\mathrm{AppellF1}\left[\frac{1}{2},\,m,\,1-m,\,\frac{3}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$2\,\Big((-1+m)\,\mathrm{AppellF1}\left[\frac{3}{2},\,m,\,2-m,\,\frac{5}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$m\,\mathrm{AppellF1}\Big[\frac{3}{2},\,1+m,\,1-m,\,\frac{5}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

$$-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Big)\ \mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)+$$

$$b\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\,\Big(\Big(\mathrm{AppellF1}\left[1,\,m,\,1-m,\,2,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\left(-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\Big)\Big/\Big(\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\ \Big(2\,\mathrm{AppellF1}\Big[1,\,m,\,1-m,\,2,$$

$$\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]+\Big((-1+m)\,\mathrm{AppellF1}\Big[2,\,m,\,2-m,$$

$$3,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]+m\,\mathrm{AppellF1}\Big[2,\,1+m,\,1-m,$$

$$3,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Big)\ \mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)-$$

$$\mathrm{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\Big/$$

$$\left(2\,\text{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\left(m\,\text{AppellF1}\left[2,\,1+m,\,1-m,\,3,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+(1+m)\,\text{AppellF1}\left[2,\,2+m,\,-m,\,3,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\Bigg)\Bigg)+$$

$$\frac{1}{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\,2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\left(\frac{1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^m$$

$$\Bigg(-\Bigg(\Bigg(3\,a\,\text{AppellF1}\left[\frac{1}{2},\,m,\,1-m,\,\frac{3}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\Bigg)\Big/$$

$$\Bigg(\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\Bigg(3\,\text{AppellF1}\left[\frac{1}{2},\,m,\,1-m,\,\frac{3}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+2\,\Bigg((-1+m)\,\text{AppellF1}\left[\frac{3}{2},\,m,\,2-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},\,1+m,\,1-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\Bigg)\Bigg)+$$

$$\Bigg(3\,a\,\text{AppellF1}\left[\frac{1}{2},\,m,\,1-m,\,\frac{3}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Bigg)\Big/$$

$$\Bigg(\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\Bigg(3\,\text{AppellF1}\left[\frac{1}{2},\,m,\,1-m,\,\frac{3}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+2\,\Bigg((-1+m)\,\text{AppellF1}\left[\frac{3}{2},\,m,\,2-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},\,1+m,\,1-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(3\,a\,\Bigg(-\frac{1}{3}\,(1-m)\,\text{AppellF1}\left[\frac{3}{2},\,m,\,2-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+\frac{1}{3}\,m\,\text{AppellF1}\left[\frac{3}{2},\,1+m,\,1-m,\,\frac{5}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Bigg)$$

$$\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\Bigg)\Big/\Bigg(\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)$$

$$\Bigg(3\,\text{AppellF1}\left[\frac{1}{2},\,m,\,1-m,\,\frac{3}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$2\left(\left(-1+m\right)\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]+\right.$$
$$m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]\Big)$$
$$\left.\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right)\Big)+\frac{1}{2}b\,\text{Sec}\left[\frac{1}{2}\left(e+fx\right)\right]^2$$
$$\Big(\Big(\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]$$
$$\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right)\Big)\Big/\left(\left(1+\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right)\Big(2\,\text{AppellF1}\Big[1,m,1-m,2,\right.$$
$$\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\Big]+\Big(\left(-1+m\right)\text{AppellF1}\Big[2,m,2-m,$$
$$3,\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\Big]+m\,\text{AppellF1}\Big[2,1+m,1-m,$$
$$3,\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\Big]\Big)\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\Big)\Big)-$$
$$\text{AppellF1}\left[1,1+m,-m,2,\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]\Big/$$
$$\Big(2\,\text{AppellF1}\left[1,1+m,-m,2,\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]+$$
$$\Big(m\,\text{AppellF1}\left[2,1+m,1-m,3,\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]+$$
$$\left(1+m\right)\text{AppellF1}\Big[2,2+m,-m,3,\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,$$
$$-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\Big]\Big)\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\Big)\Big)-$$
$$\Big(3\,a\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]$$
$$\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right)$$
$$\Big(2\left(\left(-1+m\right)\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]+\right.$$
$$m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]\Big)$$
$$\text{Sec}\left[\frac{1}{2}\left(e+fx\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]+3\Big(-\frac{1}{3}\left(1-m\right)\text{AppellF1}\Big[\frac{3}{2},m,2-m,\frac{5}{2},$$
$$\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\Big]\text{Sec}\left[\frac{1}{2}\left(e+fx\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]+$$
$$\frac{1}{3}m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}\left(e+fx\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]\Big)+2\,\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2$$
$$\Big(\left(-1+m\right)\Big(-\frac{3}{5}\left(2-m\right)\text{AppellF1}\Big[\frac{5}{2},m,3-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,$$
$$-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\Big]\text{Sec}\left[\frac{1}{2}\left(e+fx\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]+$$

$$\frac{3}{5}\,m\,\text{AppellF1}\left[\frac{5}{2},1+m,2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)+m\Big(-\frac{3}{5}(1-m)\,\text{AppellF1}\left[\frac{5}{2},1+m,\right.$$
$$2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\Big[$$
$$\frac{1}{2}(e+fx)\Big]+\frac{3}{5}(1+m)\,\text{AppellF1}\left[\frac{5}{2},2+m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)\Big)\Big)\Big)\Big/$$
$$\Big(\Big(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\Big((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)^2\Big)+b\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]$$
$$\Big(-\Big(\Big(\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big)\Big/$$
$$\Big(\Big(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)^2\Big(2\,\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\Big((-1+m)\,\text{AppellF1}\Big[2,m,2-m,3,$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+m\,\text{AppellF1}\Big[2,1+m,1-m,$$
$$3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big)\Big)+$$
$$\Big(\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)\Big/\Big(\Big(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)$$
$$\Big(2\,\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$
$$\Big((-1+m)\,\text{AppellF1}\left[2,m,2-m,3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$
$$m\,\text{AppellF1}\left[2,1+m,1-m,3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big)$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big)+\Big(\Big(-\frac{1}{2}(1-m)\,\text{AppellF1}\Big[2,m,2-m,3,$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$
$$\frac{1}{2}\,m\,\text{AppellF1}\left[2,1+m,1-m,3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big)\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Big)\Big/$$

$$\Big(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Big(2\,\text{AppellF1}\left[1, m, 1-m, 2, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\Big((-1+m)\,\text{AppellF1}\Big[2, m, 2-m, 3,$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]+m\,\text{AppellF1}\Big[2, 1+m, 1-m,$$

$$3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)-$$

$$\Big(\frac{1}{2} m\,\text{AppellF1}\left[2, 1+m, 1-m, 3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{2}(1+m)\,\text{AppellF1}\Big[2, 2+m, -m, 3,$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big)\Big/$$

$$\Big(2\,\text{AppellF1}\left[1, 1+m, -m, 2, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$\Big(m\,\text{AppellF1}\left[2, 1+m, 1-m, 3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$(1+m)\,\text{AppellF1}\left[2, 2+m, -m, 3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)-\Big(\text{AppellF1}\Big[1, m, 1-m, 2, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)$$

$$\Big(\Big((-1+m)\,\text{AppellF1}\left[2, m, 2-m, 3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$m\,\text{AppellF1}\left[2, 1+m, 1-m, 3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Big)$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+2\Big(-\frac{1}{2}(1-m)\,\text{AppellF1}\Big[2, m,$$

$$2-m, 3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{2} m\,\text{AppellF1}\Big[2, 1+m, 1-m, 3, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big)+$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big(\Big(-1+m\Big)\Big(-\frac{2}{3}(2-m)\,\text{AppellF1}\Big[3, m, 3-m, 4,$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{2}{3} m\,\text{AppellF1}\Big[3, 1+m, 2-m, 4, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big)+$$

$$m\left(-\frac{2}{3}(1-m)\,\text{AppellF1}\left[3,1+m,2-m,4,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$
$$\frac{2}{3}(1+m)\,\text{AppellF1}\left[3,2+m,1-m,4,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\right)\Big/$$
$$\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\left(2\,\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\left(\left(-1+m\right)\text{AppellF1}\left[2,m,2-m,3,\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+m\,\text{AppellF1}\left[2,1+m,1-m,\right.$$
$$\left.\left.\left.3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right)+$$
$$\left(\text{AppellF1}\left[1,1+m,-m,2,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$
$$\left(\left(m\,\text{AppellF1}\left[2,1+m,1-m,3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.\right.$$
$$\left.(1+m)\,\text{AppellF1}\left[2,2+m,-m,3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+2\left(\frac{1}{2}m\,\text{AppellF1}\left[2,1+m,1-m,\right.\right.$$
$$3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{2}(1+m)\,\text{AppellF1}\left[2,2+m,-m,3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(m\left(-\frac{2}{3}(1-m)\,\text{AppellF1}\left[3,1+m,2-m,4,\right.\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}\right.$$
$$\left.(e+fx)\right]+\frac{2}{3}(1+m)\,\text{AppellF1}\left[3,2+m,1-m,4,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+$$
$$(1+m)\left(\frac{2}{3}m\,\text{AppellF1}\left[3,2+m,1-m,4,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$
$$\frac{2}{3}(2+m)\,\text{AppellF1}\left[3,3+m,-m,4,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\right)\Big/$$

$$\left(2\,\text{AppellF1}\left[1,\,1+m,\,-m,\,2,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\left(m\,\text{AppellF1}\left[2,\,1+m,\,1-m,\,3,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+(1+m)\,\text{AppellF1}\left[2,\,2+m,\,-m,\,3,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\Bigg)\Bigg)\Bigg)\Bigg)$$

Problem 643: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\frac{(d\,\text{Sec}[e+f\,x])^m}{a+b\,\text{Tan}[e+f\,x]}\,dx$$

Optimal (type 6, 141 leaves, 6 steps):

$$-\frac{b\,\text{Hypergeometric2F1}\left[1,\,\frac{m}{2},\,\frac{2+m}{2},\,\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]\,(d\,\text{Sec}[e+f\,x])^m}{\left(a^2+b^2\right)\,f\,m}+\frac{1}{a\,f}\text{AppellF1}\left[\frac{1}{2},\,1,\,1-\frac{m}{2},\,\frac{3}{2},\,\frac{b^2\,\text{Tan}[e+f\,x]^2}{a^2},\,-\text{Tan}[e+f\,x]^2\right]\,(d\,\text{Sec}[e+f\,x])^m\,\left(\text{Sec}[e+f\,x]^2\right)^{-m/2}\,\text{Tan}[e+f\,x]$$

Result (type 6, 1158 leaves):

$$\Bigg(\left(d\,\mathrm{Sec}[e+f\,x]\right)^m$$

$$\Bigg(b-b\left(\mathrm{Sec}[e+f\,x]^2\right)^{m/2}+a\,m\,\mathrm{Hypergeometric2F1}\left[\frac{1}{2},1-\frac{m}{2},\frac{3}{2},-\mathrm{Tan}[e+f\,x]^2\right]\mathrm{Tan}[e+f\,x]+$$

$$b\,\mathrm{AppellF1}\left[-m,-\frac{m}{2},-\frac{m}{2},1-m,\frac{a-\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]$$

$$\left(\mathrm{Sec}[e+f\,x]^2\right)^{m/2}\left(\frac{b\left(-\mathrm{i}+\mathrm{Tan}[e+f\,x]\right)}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{-m/2}\left(\frac{b\left(\mathrm{i}+\mathrm{Tan}[e+f\,x]\right)}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{-m/2}\Bigg)\Bigg)\Bigg/$$

$$\Bigg(f\left(a+b\,\mathrm{Tan}[e+f\,x]\right)\Bigg(a\,m\,\mathrm{Hypergeometric2F1}\left[\frac{1}{2},1-\frac{m}{2},\frac{3}{2},-\mathrm{Tan}[e+f\,x]^2\right]\mathrm{Sec}[e+f\,x]^2-$$

$$b\,m\left(\mathrm{Sec}[e+f\,x]^2\right)^{m/2}\mathrm{Tan}[e+f\,x]+$$

$$b\,m\,\mathrm{AppellF1}\left[-m,-\frac{m}{2},-\frac{m}{2},1-m,\frac{a-\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]$$

$$\left(\mathrm{Sec}[e+f\,x]^2\right)^{m/2}\mathrm{Tan}[e+f\,x]\left(\frac{b\left(-\mathrm{i}+\mathrm{Tan}[e+f\,x]\right)}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{-m/2}\left(\frac{b\left(\mathrm{i}+\mathrm{Tan}[e+f\,x]\right)}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{-m/2}+$$

$$b\left(\mathrm{Sec}[e+f\,x]^2\right)^{m/2}\left(\frac{b\left(-\mathrm{i}+\mathrm{Tan}[e+f\,x]\right)}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{-m/2}\left(\frac{b\left(\mathrm{i}+\mathrm{Tan}[e+f\,x]\right)}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{-m/2}$$

$$\Bigg(-\Bigg(\Bigg(\left(a-\mathrm{i}\,b\right)b\,m^2\,\mathrm{AppellF1}\left[1-m,1-\frac{m}{2},-\frac{m}{2},2-m,\frac{a-\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]$$

$$\mathrm{Sec}[e+f\,x]^2\Bigg)\Bigg/\left(2\left(1-m\right)\left(a+b\,\mathrm{Tan}[e+f\,x]\right)^2\right)\Bigg)-$$

$$\Bigg(\left(a+\mathrm{i}\,b\right)b\,m^2\,\mathrm{AppellF1}\left[1-m,-\frac{m}{2},1-\frac{m}{2},2-m,\frac{a-\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]$$

$$\mathrm{Sec}[e+f\,x]^2\Bigg)\Bigg/\left(2\left(1-m\right)\left(a+b\,\mathrm{Tan}[e+f\,x]\right)^2\right)\Bigg)-$$

$$\frac{1}{2}b\,m\,\mathrm{AppellF1}\left[-m,-\frac{m}{2},-\frac{m}{2},1-m,\frac{a-\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]$$

$$\left(\mathrm{Sec}[e+f\,x]^2\right)^{m/2}\left(\frac{b\left(-\mathrm{i}+\mathrm{Tan}[e+f\,x]\right)}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{-1-\frac{m}{2}}\left(\frac{b\left(\mathrm{i}+\mathrm{Tan}[e+f\,x]\right)}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{-m/2}$$

$$\left(-\frac{b^2\,\mathrm{Sec}[e+f\,x]^2\left(-\mathrm{i}+\mathrm{Tan}[e+f\,x]\right)}{\left(a+b\,\mathrm{Tan}[e+f\,x]\right)^2}+\frac{b\,\mathrm{Sec}[e+f\,x]^2}{a+b\,\mathrm{Tan}[e+f\,x]}\right)-$$

$$\frac{1}{2}b\,m\,\mathrm{AppellF1}\left[-m,-\frac{m}{2},-\frac{m}{2},1-m,\frac{a-\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]$$

$$\left(\mathrm{Sec}[e+f\,x]^2\right)^{m/2}\left(\frac{b\left(-\mathrm{i}+\mathrm{Tan}[e+f\,x]\right)}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{-m/2}\left(\frac{b\left(\mathrm{i}+\mathrm{Tan}[e+f\,x]\right)}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{-1-\frac{m}{2}}$$

$$\left(-\frac{b^2\,\mathrm{Sec}[e+f\,x]^2\left(\mathrm{i}+\mathrm{Tan}[e+f\,x]\right)}{\left(a+b\,\mathrm{Tan}[e+f\,x]\right)^2}+\frac{b\,\mathrm{Sec}[e+f\,x]^2}{a+b\,\mathrm{Tan}[e+f\,x]}\right)+a\,m\,\mathrm{Sec}[e+f\,x]^2$$

$$\left(-\mathrm{Hypergeometric2F1}\left[\frac{1}{2},1-\frac{m}{2},\frac{3}{2},-\mathrm{Tan}[e+f\,x]^2\right]+\left(1+\mathrm{Tan}[e+f\,x]^2\right)^{-1+\frac{m}{2}}\right)\Bigg)\Bigg)$$

Problem 644: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{(d \operatorname{Sec}[e+f x])^m}{(a+b \operatorname{Tan}[e+f x])^2} \, dx$$

Optimal (type 6, 227 leaves, 7 steps):

$$-\frac{2 a b \operatorname{Hypergeometric2F1}\left[2, \frac{m}{2}, \frac{2+m}{2}, \frac{b^2 \operatorname{Sec}[e+f x]^2}{a^2+b^2}\right] (d \operatorname{Sec}[e+f x])^m}{\left(a^2+b^2\right)^2 f m}+\frac{1}{a^2 f}$$
$$\operatorname{AppellF1}\left[\frac{1}{2}, 2, 1-\frac{m}{2}, \frac{3}{2}, \frac{b^2 \operatorname{Tan}[e+f x]^2}{a^2}, -\operatorname{Tan}[e+f x]^2\right] (d \operatorname{Sec}[e+f x])^m \left(\operatorname{Sec}[e+f x]^2\right)^{-m/2}$$
$$\operatorname{Tan}[e+f x]+\frac{1}{3 a^4 f} b^2 \operatorname{AppellF1}\left[\frac{3}{2}, 2, 1-\frac{m}{2}, \frac{5}{2}, \frac{b^2 \operatorname{Tan}[e+f x]^2}{a^2}, -\operatorname{Tan}[e+f x]^2\right]$$
$$(d \operatorname{Sec}[e+f x])^m \left(\operatorname{Sec}[e+f x]^2\right)^{-m/2} \operatorname{Tan}[e+f x]^3$$

Result (type 6, 356 leaves):

$$\left(2 (-4+m) \operatorname{AppellF1}\left[3-m, 1-\frac{m}{2}, 1-\frac{m}{2}, 4-m, \frac{a-i b}{a+b \operatorname{Tan}[e+f x]}, \frac{a+i b}{a+b \operatorname{Tan}[e+f x]}\right]\right.$$
$$\left.(d \operatorname{Sec}[e+f x])^m (a \operatorname{Cos}[e+f x]+b \operatorname{Sin}[e+f x])^2\right) \Big/ \left(b f (-3+m) (a+b \operatorname{Tan}[e+f x])^2\right.$$
$$\left((-2+m) \left((a+i b) \operatorname{AppellF1}\left[4-m, 1-\frac{m}{2}, 2-\frac{m}{2}, 5-m, \frac{a-i b}{a+b \operatorname{Tan}[e+f x]}, \frac{a+i b}{a+b \operatorname{Tan}[e+f x]}\right]+\right.\right.$$
$$\left.(a-i b) \operatorname{AppellF1}\left[4-m, 2-\frac{m}{2}, 1-\frac{m}{2}, 5-m, \frac{a-i b}{a+b \operatorname{Tan}[e+f x]}, \frac{a+i b}{a+b \operatorname{Tan}[e+f x]}\right]\right)+$$
$$2 (-4+m) \operatorname{AppellF1}\left[3-m, 1-\frac{m}{2}, 1-\frac{m}{2}, 4-m, \frac{a-i b}{a+b \operatorname{Tan}[e+f x]}, \frac{a+i b}{a+b \operatorname{Tan}[e+f x]}\right]$$
$$\left.\left.(a+b \operatorname{Tan}[e+f x])\right)\right)$$

Problem 645: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int (d \operatorname{Sec}[e+f x])^m (a+b \operatorname{Tan}[e+f x])^n \, dx$$

Optimal (type 6, 181 leaves, 3 steps):

$$\left(b \operatorname{AppellF1}\left[1+n, 1-\frac{m}{2}, 1-\frac{m}{2}, 2+n, \frac{a+b \operatorname{Tan}[e+f x]}{a+\sqrt{-b^2}}, \frac{a+b \operatorname{Tan}[e+f x]}{a-\sqrt{-b^2}}\right]\right.$$
$$(d \operatorname{Sec}[e+f x])^m (a+b \operatorname{Tan}[e+f x])^{1+n} \left(1+\frac{a+b \operatorname{Tan}[e+f x]}{-a+\sqrt{-b^2}}\right)^{-m/2}$$
$$\left.\left(1-\frac{a+b \operatorname{Tan}[e+f x]}{a+\sqrt{-b^2}}\right)^{-m/2}\right) \Big/ \left(\left(a^2+b^2\right) f (1+n)\right)$$

Result (type 6, 1527 leaves):

$$\left(b\,\text{AppellF1}\left[1+n,1-\frac{m}{2},1-\frac{m}{2},2+n,\frac{a+b\,\text{Tan}[e+f\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[e+f\,x]}{a+i\,b}\right]\right.$$

$$(d\,\text{Sec}[e+f\,x])^m\left(\text{Sec}[e+f\,x]^2\right)^{\frac{m+n}{2}}\left(-\frac{b\,(-i+\text{Tan}[e+f\,x])}{a+i\,b}\right)^{-m/2}$$

$$\left.\left(-\frac{b\,(i+\text{Tan}[e+f\,x])}{a-i\,b}\right)^{-m/2}(a+b\,\text{Tan}[e+f\,x])^{1+n}\left(\frac{a+b\,\text{Tan}[e+f\,x]}{\sqrt{\text{Sec}[e+f\,x]^2}}\right)^n\right)\Big/$$

$$\left(\left(a^2+b^2\right)f\,(1+n)\left(\left(b^2\,\text{AppellF1}\left[1+n,1-\frac{m}{2},1-\frac{m}{2},2+n,\frac{a+b\,\text{Tan}[e+f\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[e+f\,x]}{a+i\,b}\right]\right.\right.\right.$$

$$\left(\text{Sec}[e+f\,x]^2\right)^{1+\frac{m+n}{2}}\left(-\frac{b\,(-i+\text{Tan}[e+f\,x])}{a+i\,b}\right)^{-m/2}$$

$$\left.\left(-\frac{b\,(i+\text{Tan}[e+f\,x])}{a-i\,b}\right)^{-m/2}\left(\frac{a+b\,\text{Tan}[e+f\,x]}{\sqrt{\text{Sec}[e+f\,x]^2}}\right)^n\right)\Big/\left(\left(a^2+b^2\right)(1+n)\right)+$$

$$\left(b^2\,m\,\text{AppellF1}\left[1+n,1-\frac{m}{2},1-\frac{m}{2},2+n,\frac{a+b\,\text{Tan}[e+f\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[e+f\,x]}{a+i\,b}\right]\right.$$

$$\left(\text{Sec}[e+f\,x]^2\right)^{1+\frac{m+n}{2}}\left(-\frac{b\,(-i+\text{Tan}[e+f\,x])}{a+i\,b}\right)^{-m/2}\left(-\frac{b\,(i+\text{Tan}[e+f\,x])}{a-i\,b}\right)^{-1-\frac{m}{2}}$$

$$\left.(a+b\,\text{Tan}[e+f\,x])\left(\frac{a+b\,\text{Tan}[e+f\,x]}{\sqrt{\text{Sec}[e+f\,x]^2}}\right)^n\right)\Big/\left(2\,(a-i\,b)\left(a^2+b^2\right)(1+n)\right)+$$

$$\left(b^2\,m\,\text{AppellF1}\left[1+n,1-\frac{m}{2},1-\frac{m}{2},2+n,\frac{a+b\,\text{Tan}[e+f\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[e+f\,x]}{a+i\,b}\right]\right.$$

$$\left(\text{Sec}[e+f\,x]^2\right)^{1+\frac{m+n}{2}}\left(-\frac{b\,(-i+\text{Tan}[e+f\,x])}{a+i\,b}\right)^{-1-\frac{m}{2}}\left(-\frac{b\,(i+\text{Tan}[e+f\,x])}{a-i\,b}\right)^{-m/2}$$

$$\left.(a+b\,\text{Tan}[e+f\,x])\left(\frac{a+b\,\text{Tan}[e+f\,x]}{\sqrt{\text{Sec}[e+f\,x]^2}}\right)^n\right)\Big/\left(2\,(a+i\,b)\left(a^2+b^2\right)(1+n)\right)+$$

$$\left(b\left(\text{Sec}[e+f\,x]^2\right)^{\frac{m+n}{2}}\left(\left(b\left(1-\frac{m}{2}\right)(1+n)\,\text{AppellF1}\left[2+n,1-\frac{m}{2},2-\frac{m}{2},3+n,\right.\right.\right.\right.$$

$$\left.\left.\frac{a+b\,\text{Tan}[e+f\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[e+f\,x]}{a+i\,b}\right]\text{Sec}[e+f\,x]^2\right)\Big/\left((a+i\,b)(2+n)\right)+$$

$$\left(b\left(1-\frac{m}{2}\right)(1+n)\,\text{AppellF1}\left[2+n,2-\frac{m}{2},1-\frac{m}{2},3+n,\frac{a+b\,\text{Tan}[e+f\,x]}{a-i\,b},\right.\right.$$

$$\left.\left.\frac{a+b\,\text{Tan}[e+f\,x]}{a+i\,b}\right]\text{Sec}[e+f\,x]^2\right)\Big/\left((a-i\,b)(2+n)\right)\Big)$$

$$\left(-\frac{b\left(-\mathrm{i}+\mathrm{Tan}[e+f x]\right)}{a+\mathrm{i} b}\right)^{-m/2}\left(-\frac{b\left(\mathrm{i}+\mathrm{Tan}[e+f x]\right)}{a-\mathrm{i} b}\right)^{-m/2}\left(a+b\,\mathrm{Tan}[e+f x]\right)$$

$$\left(\frac{a+b\,\mathrm{Tan}[e+f x]}{\sqrt{\mathrm{Sec}[e+f x]^2}}\right)^n\Bigg/\left(\left(a^2+b^2\right)(1+n)\right)+$$

$$\Bigg(b\,(m+n)\,\mathrm{AppellF1}\left[1+n,1-\frac{m}{2},1-\frac{m}{2},2+n,\frac{a+b\,\mathrm{Tan}[e+f x]}{a-\mathrm{i} b},\frac{a+b\,\mathrm{Tan}[e+f x]}{a+\mathrm{i} b}\right]$$

$$\left(\mathrm{Sec}[e+f x]^2\right)^{\frac{m+n}{2}}\mathrm{Tan}[e+f x]\left(-\frac{b\left(-\mathrm{i}+\mathrm{Tan}[e+f x]\right)}{a+\mathrm{i} b}\right)^{-m/2}\left(-\frac{b\left(\mathrm{i}+\mathrm{Tan}[e+f x]\right)}{a-\mathrm{i} b}\right)^{-m/2}$$

$$\left(a+b\,\mathrm{Tan}[e+f x]\right)\left(\frac{a+b\,\mathrm{Tan}[e+f x]}{\sqrt{\mathrm{Sec}[e+f x]^2}}\right)^n\Bigg)\Bigg/\left(\left(a^2+b^2\right)(1+n)\right)+$$

$$\Bigg(b\,n\,\mathrm{AppellF1}\left[1+n,1-\frac{m}{2},1-\frac{m}{2},2+n,\frac{a+b\,\mathrm{Tan}[e+f x]}{a-\mathrm{i} b},\frac{a+b\,\mathrm{Tan}[e+f x]}{a+\mathrm{i} b}\right]$$

$$\left(\mathrm{Sec}[e+f x]^2\right)^{\frac{m+n}{2}}\left(-\frac{b\left(-\mathrm{i}+\mathrm{Tan}[e+f x]\right)}{a+\mathrm{i} b}\right)^{-m/2}$$

$$\left(-\frac{b\left(\mathrm{i}+\mathrm{Tan}[e+f x]\right)}{a-\mathrm{i} b}\right)^{-m/2}\left(a+b\,\mathrm{Tan}[e+f x]\right)\left(\frac{a+b\,\mathrm{Tan}[e+f x]}{\sqrt{\mathrm{Sec}[e+f x]^2}}\right)^{-1+n}$$

$$\left(b\sqrt{\mathrm{Sec}[e+f x]^2}-\frac{\mathrm{Tan}[e+f x]\left(a+b\,\mathrm{Tan}[e+f x]\right)}{\sqrt{\mathrm{Sec}[e+f x]^2}}\right)\Bigg)\Bigg/\left(\left(a^2+b^2\right)(1+n)\right)\Bigg)$$

Problem 646: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Sec}[c+d x]^6\left(a+b\,\mathrm{Tan}[c+d x]\right)^n\,dx$$

Optimal (type 3, 161 leaves, 3 steps):

$$\frac{\left(a^2+b^2\right)^2\left(a+b\,\mathrm{Tan}[c+d x]\right)^{1+n}}{b^5 d\,(1+n)}-\frac{4 a\left(a^2+b^2\right)\left(a+b\,\mathrm{Tan}[c+d x]\right)^{2+n}}{b^5 d\,(2+n)}+$$

$$\frac{2\left(3 a^2+b^2\right)\left(a+b\,\mathrm{Tan}[c+d x]\right)^{3+n}}{b^5 d\,(3+n)}-\frac{4 a\left(a+b\,\mathrm{Tan}[c+d x]\right)^{4+n}}{b^5 d\,(4+n)}+\frac{\left(a+b\,\mathrm{Tan}[c+d x]\right)^{5+n}}{b^5 d\,(5+n)}$$

Result (type 3, 377 leaves):

$$\frac{1}{b^5 d (1+n) (2+n) (3+n) (4+n) (5+n)} \mathrm{Sec}[c+d x]^4 \left(9 a^4+33 a^2 b^2+64 b^4+18 a^2 b^2 n+96 b^4 n+3 a^2 b^2 n^2+52 b^4 n^2+12 b^4 n^3+b^4 n^4+2 \left(6 a^4+a^2 b^2 \left(20+9 n+n^2\right)+b^4 \left(24+26 n+9 n^2+n^3\right)\right) \mathrm{Cos}[2 (c+d x)]+\left(3 a^4-a^2 b^2 \left(-7+n^2\right)+b^4 \left(8+6 n+n^2\right)\right) \mathrm{Cos}[4 (c+d x)]-6 a^3 b \,\mathrm{Sin}[2 (c+d x)]-26 a b^3 \,\mathrm{Sin}[2 (c+d x)]-6 a^3 b n \,\mathrm{Sin}[2 (c+d x)]-40 a b^3 n \,\mathrm{Sin}[2 (c+d x)]-16 a b^3 n^2 \,\mathrm{Sin}[2 (c+d x)]-2 a b^3 n^3 \,\mathrm{Sin}[2 (c+d x)]-3 a^3 b \,\mathrm{Sin}[4 (c+d x)]-7 a b^3 \,\mathrm{Sin}[4 (c+d x)]-3 a^3 b n \,\mathrm{Sin}[4 (c+d x)]-9 a b^3 n \,\mathrm{Sin}[4 (c+d x)]-2 a b^3 n^2 \,\mathrm{Sin}[4 (c+d x)]\right) (a+b \,\mathrm{Tan}[c+d x])^{1+n}$$

Problem 649: Unable to integrate problem.

$$\int \mathrm{Cos}[c+d x]^2 (a+b \,\mathrm{Tan}[c+d x])^n \, dx$$

Optimal (type 5, 272 leaves, 6 steps):

$$-\left(\left(\left(\sqrt{-b^2}\left(1+\frac{a^2}{b^2}-n\right)-a n\right) \mathrm{Hypergeometric2F1}\left[1, 1+n, 2+n, \frac{a+b \,\mathrm{Tan}[c+d x]}{a-\sqrt{-b^2}}\right] (a+b \,\mathrm{Tan}[c+d x])^{1+n}\right) \Big/ \left(4 \left(1+\frac{a^2}{b^2}\right) b \left(a-\sqrt{-b^2}\right) d (1+n)\right)\right)+\left(b\left(\sqrt{-b^2}\left(1+\frac{a^2}{b^2}-n\right)+a n\right) \mathrm{Hypergeometric2F1}\left[1, 1+n, 2+n, \frac{a+b \,\mathrm{Tan}[c+d x]}{a+\sqrt{-b^2}}\right] (a+b \,\mathrm{Tan}[c+d x])^{1+n}\right) \Big/ \left(4 \left(a^2+b^2\right) \left(a+\sqrt{-b^2}\right) d (1+n)\right)+\frac{\mathrm{Cos}[c+d x]^2 (b+a \,\mathrm{Tan}[c+d x]) (a+b \,\mathrm{Tan}[c+d x])^{1+n}}{2 \left(a^2+b^2\right) d}$$

Result (type 8, 23 leaves):

$$\int \mathrm{Cos}[c+d x]^2 (a+b \,\mathrm{Tan}[c+d x])^n \, dx$$

Problem 650: Unable to integrate problem.

$$\int \mathrm{Cos}[c+d x]^4 (a+b \,\mathrm{Tan}[c+d x])^n \, dx$$

Optimal (type 5, 434 leaves, 7 steps):

$$\left(b\left(\frac{a\left(5+\frac{3a^2}{b^2}-2n\right)n}{b^2}-\frac{\sqrt{-b^2}\left(3a^4+a^2b^2\left(6-2n-n^2\right)+b^4\left(3-4n+n^2\right)\right)}{b^6}\right)\right.$$
$$\left.\text{Hypergeometric2F1}\left[1,1+n,2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\sqrt{-b^2}}\right](a+b\,\text{Tan}[c+d\,x])^{1+n}\right)\Big/$$
$$\left(16\left(1+\frac{a^2}{b^2}\right)^2\left(a-\sqrt{-b^2}\right)d\,(1+n)\right)+$$
$$\left(b\left(\frac{a\left(5+\frac{3a^2}{b^2}-2n\right)n}{b^2}+\frac{\sqrt{-b^2}\left(3a^4+a^2b^2\left(6-2n-n^2\right)+b^4\left(3-4n+n^2\right)\right)}{b^6}\right)\right.$$
$$\left.\text{Hypergeometric2F1}\left[1,1+n,2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a+\sqrt{-b^2}}\right](a+b\,\text{Tan}[c+d\,x])^{1+n}\right)\Big/$$
$$\left(16\left(1+\frac{a^2}{b^2}\right)^2\left(a+\sqrt{-b^2}\right)d\,(1+n)\right)+\frac{\text{Cos}[c+d\,x]^4\,(b+a\,\text{Tan}[c+d\,x])\,(a+b\,\text{Tan}[c+d\,x])^{1+n}}{4\left(a^2+b^2\right)d}+$$
$$\frac{1}{8\left(a^2+b^2\right)^2d}b\,\text{Cos}[c+d\,x]^2\,(a+b\,\text{Tan}[c+d\,x])^{1+n}$$
$$\left(b^2(3-n)+a^2(1+n)+a\,b\left(5+\frac{3a^2}{b^2}-2n\right)\text{Tan}[c+d\,x]\right)$$

Result (type 8, 23 leaves):

$$\int\text{Cos}[c+d\,x]^4\,(a+b\,\text{Tan}[c+d\,x])^n\,dx$$

Problem 651: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\text{Sec}[c+d\,x]^3\,(a+b\,\text{Tan}[c+d\,x])^n\,dx$$

Optimal (type 6, 159 leaves, 3 steps):

$$\left(\text{AppellF1}\left[1+n,-\frac{1}{2},-\frac{1}{2},2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\sqrt{-b^2}},\frac{a+b\,\text{Tan}[c+d\,x]}{a+\sqrt{-b^2}}\right]\text{Sec}[c+d\,x]\right.$$
$$\left.(a+b\,\text{Tan}[c+d\,x])^{1+n}\right)\Big/\left(b\,d\,(1+n)\sqrt{1-\frac{a+b\,\text{Tan}[c+d\,x]}{a-\sqrt{-b^2}}}\sqrt{1-\frac{a+b\,\text{Tan}[c+d\,x]}{a+\sqrt{-b^2}}}\right)$$

Result (type 6, 323 leaves):

$$\left(2\,(a-i\,b)\,(a+i\,b)\,(2+n)\,\text{AppellF1}\left[1+n,-\frac{1}{2},-\frac{1}{2},2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+i\,b}\right]\right.$$
$$\left.\text{Sec}[c+d\,x]^2\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])\,(a+b\,\text{Tan}[c+d\,x])^n\right)\Big/\Big(b\,d\,(1+n)$$
$$\Big(2\,(a^2+b^2)\,(2+n)\,\text{AppellF1}\left[1+n,-\frac{1}{2},-\frac{1}{2},2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+i\,b}\right]-$$
$$\Big((a-i\,b)\,\text{AppellF1}\left[2+n,-\frac{1}{2},\frac{1}{2},3+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+i\,b}\right]+$$
$$(a+i\,b)\,\text{AppellF1}\left[2+n,\frac{1}{2},-\frac{1}{2},3+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+i\,b}\right]\Big)\,(a+$$
$$b\,\text{Tan}[c+d\,x])\Big)\Big)$$

Problem 652: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Sec}[c+d\,x]\,(a+b\,\text{Tan}[c+d\,x])^n\,dx$$

Optimal (type 6, 159 leaves, 3 steps):

$$\frac{1}{b\,d\,(1+n)}\text{AppellF1}\left[1+n,\frac{1}{2},\frac{1}{2},2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\sqrt{-b^2}},\frac{a+b\,\text{Tan}[c+d\,x]}{a+\sqrt{-b^2}}\right]$$
$$\text{Cos}[c+d\,x]\,(a+b\,\text{Tan}[c+d\,x])^{1+n}\,\sqrt{1-\frac{a+b\,\text{Tan}[c+d\,x]}{a-\sqrt{-b^2}}}\,\sqrt{1-\frac{a+b\,\text{Tan}[c+d\,x]}{a+\sqrt{-b^2}}}$$

Result (type 6, 314 leaves):

$$\left(2\,(a-i\,b)\,(a+i\,b)\,(2+n)\,\text{AppellF1}\left[1+n,\frac{1}{2},\frac{1}{2},2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+i\,b}\right]\right.$$
$$\left.(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])\,(a+b\,\text{Tan}[c+d\,x])^n\right)\Big/\Big(b\,d\,(1+n)$$
$$\Big(2\,(a^2+b^2)\,(2+n)\,\text{AppellF1}\left[1+n,\frac{1}{2},\frac{1}{2},2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+i\,b}\right]+$$
$$\Big((a-i\,b)\,\text{AppellF1}\left[2+n,\frac{1}{2},\frac{3}{2},3+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+i\,b}\right]+$$
$$(a+i\,b)\,\text{AppellF1}\left[2+n,\frac{3}{2},\frac{1}{2},3+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-i\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+i\,b}\right]\Big)\,(a+$$
$$b\,\text{Tan}[c+d\,x])\Big)\Big)$$

Problem 653: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \text{Cos}[c+d\,x]\,(a+b\,\text{Tan}[c+d\,x])^n\,dx$$

Optimal (type 6, 161 leaves, 3 steps):

$$\frac{1}{b\,d\,(1+n)}\text{AppellF1}\left[1+n,\frac{3}{2},\frac{3}{2},2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\sqrt{-b^2}},\frac{a+b\,\text{Tan}[c+d\,x]}{a+\sqrt{-b^2}}\right]$$
$$\text{Cos}[c+d\,x]^3\,(a+b\,\text{Tan}[c+d\,x])^{1+n}\left(1-\frac{a+b\,\text{Tan}[c+d\,x]}{a-\sqrt{-b^2}}\right)^{3/2}\left(1-\frac{a+b\,\text{Tan}[c+d\,x]}{a+\sqrt{-b^2}}\right)^{3/2}$$

Result (type 6, 323 leaves):

$$\left(2\,(a-\mathrm{i}\,b)\,(a+\mathrm{i}\,b)\,(2+n)\,\text{AppellF1}\left[1+n,\frac{3}{2},\frac{3}{2},2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\mathrm{i}\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+\mathrm{i}\,b}\right]\right.$$
$$\left.\text{Cos}[c+d\,x]^2\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])\,(a+b\,\text{Tan}[c+d\,x])^n\right)\Big/\left(b\,d\,(1+n)\right.$$
$$\left(2\,(a^2+b^2)\,(2+n)\,\text{AppellF1}\left[1+n,\frac{3}{2},\frac{3}{2},2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\mathrm{i}\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+\mathrm{i}\,b}\right]+\right.$$
$$3\left((a-\mathrm{i}\,b)\,\text{AppellF1}\left[2+n,\frac{3}{2},\frac{5}{2},3+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\mathrm{i}\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+\mathrm{i}\,b}\right]+\right.$$
$$\left.(a+\mathrm{i}\,b)\,\text{AppellF1}\left[2+n,\frac{5}{2},\frac{3}{2},3+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\mathrm{i}\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+\mathrm{i}\,b}\right]\right)(a+$$
$$\left.\left.b\,\text{Tan}[c+d\,x])\right)\right)$$

Problem 654: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \text{Cos}[c+d\,x]^3\,(a+b\,\text{Tan}[c+d\,x])^n\,dx$$

Optimal (type 6, 161 leaves, 3 steps):

$$\frac{1}{b\,d\,(1+n)}\text{AppellF1}\left[1+n,\frac{5}{2},\frac{5}{2},2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\sqrt{-b^2}},\frac{a+b\,\text{Tan}[c+d\,x]}{a+\sqrt{-b^2}}\right]$$
$$\text{Cos}[c+d\,x]^5\,(a+b\,\text{Tan}[c+d\,x])^{1+n}\left(1-\frac{a+b\,\text{Tan}[c+d\,x]}{a-\sqrt{-b^2}}\right)^{5/2}\left(1-\frac{a+b\,\text{Tan}[c+d\,x]}{a+\sqrt{-b^2}}\right)^{5/2}$$

Result (type 6, 323 leaves):

$$\left(2\,(a-\mathrm{i}\,b)\,(a+\mathrm{i}\,b)\,(2+n)\,\text{AppellF1}\left[1+n,\frac{5}{2},\frac{5}{2},2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\mathrm{i}\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+\mathrm{i}\,b}\right]\right.$$
$$\left.\text{Cos}[c+d\,x]^4\,(a\,\text{Cos}[c+d\,x]+b\,\text{Sin}[c+d\,x])\,(a+b\,\text{Tan}[c+d\,x])^n\right)\Big/\left(b\,d\,(1+n)\right.$$
$$\left(2\,(a^2+b^2)\,(2+n)\,\text{AppellF1}\left[1+n,\frac{5}{2},\frac{5}{2},2+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\mathrm{i}\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+\mathrm{i}\,b}\right]+\right.$$
$$5\left((a-\mathrm{i}\,b)\,\text{AppellF1}\left[2+n,\frac{5}{2},\frac{7}{2},3+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\mathrm{i}\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+\mathrm{i}\,b}\right]+\right.$$
$$\left.(a+\mathrm{i}\,b)\,\text{AppellF1}\left[2+n,\frac{7}{2},\frac{5}{2},3+n,\frac{a+b\,\text{Tan}[c+d\,x]}{a-\mathrm{i}\,b},\frac{a+b\,\text{Tan}[c+d\,x]}{a+\mathrm{i}\,b}\right]\right)(a+$$
$$\left.\left.b\,\text{Tan}[c+d\,x])\right)\right)$$

Problem 656: Result unnecessarily involves higher level functions and more

than twice size of optimal antiderivative.

$$\int (e \cos[c+d x])^{5/2} (a+i a \tan[c+d x]) \, dx$$

Optimal (type 4, 90 leaves, 5 steps):

$$-\frac{2 i a (e \cos[c+d x])^{5/2}}{5 d}+\frac{6 a (e \cos[c+d x])^{5/2} \text{EllipticE}\left[\frac{1}{2} (c+d x), 2\right]}{5 d \cos[c+d x]^{5/2}}+\frac{2 a (e \cos[c+d x])^{5/2} \tan[c+d x]}{5 d}$$

Result (type 5, 195 leaves):

$$-\frac{1}{10 d} i a e^2 \sqrt{e \cos[c+d x]} \csc[c] \left(6 \cos[c]+3 \cos[c+2 d x]+3 \cos[3 c+2 d x]- 6 e^{-i (c+2 d x)} \sqrt{1+e^{2 i (c+d x)}} \text{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2 i (c+d x)}\right]- 2 e^{-i c} \sqrt{1+e^{2 i (c+d x)}} \text{Hypergeometric2F1}\left[\frac{1}{2}, \frac{3}{4}, \frac{7}{4}, -e^{2 i (c+d x)}\right]+ 2 i \sin[c]-4 i \sin[c+2 d x]-2 i \sin[3 c+2 d x]\right) (-i+\tan[c+d x])$$

Problem 658: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \sqrt{e \cos[c+d x]} (a+i a \tan[c+d x]) \, dx$$

Optimal (type 4, 60 leaves, 4 steps):

$$-\frac{2 i a \sqrt{e \cos[c+d x]}}{d}+\frac{2 a \sqrt{e \cos[c+d x]} \text{EllipticE}\left[\frac{1}{2} (c+d x), 2\right]}{d \sqrt{\cos[c+d x]}}$$

Result (type 5, 162 leaves):

$$-\left(\left(4 i a e^{2 i c} \sqrt{e \cos[c+d x]} \left(3+3 e^{2 i (c+d x)}-3 \sqrt{1+e^{2 i (c+d x)}} \text{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2 i (c+d x)}\right]- e^{2 i d x} \sqrt{1+e^{2 i (c+d x)}} \text{Hypergeometric2F1}\left[\frac{1}{2}, \frac{3}{4}, \frac{7}{4}, -e^{2 i (c+d x)}\right]\right)\right) \Big/ \left(3 d \left(-1+e^{2 i c}\right) \left(1+e^{2 i (c+d x)}\right)\right)\right)$$

Problem 659: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \frac{a + i a \operatorname{Tan}[c + d x]}{\sqrt{e \operatorname{Cos}[c + d x]}} \, dx$$

Optimal (type 4, 60 leaves, 4 steps):

$$\frac{2 i a}{d \sqrt{e \operatorname{Cos}[c + d x]}} + \frac{2 a \sqrt{\operatorname{Cos}[c + d x]} \operatorname{EllipticF}\left[\frac{1}{2} (c + d x), 2\right]}{d \sqrt{e \operatorname{Cos}[c + d x]}}$$

Result (type 5, 143 leaves):

$$-\frac{1}{d e \sqrt{\operatorname{Csc}[c]^2}} \sqrt{2} \, a \sqrt{e \operatorname{Cos}[c + d x]} \, (-i + \operatorname{Cot}[c]) \Big(\sqrt{2} \sqrt{\operatorname{Csc}[c]^2} + i \operatorname{Cos}[c + d x] \sqrt{1 + \operatorname{Cos}[2 d x - 2 \operatorname{ArcTan}[\operatorname{Cot}[c]]]} \operatorname{Csc}[c]$$
$$\operatorname{HypergeometricPFQ}\left[\left\{\frac{1}{4}, \frac{1}{2}\right\}, \left\{\frac{5}{4}\right\}, \operatorname{Sin}[d x - \operatorname{ArcTan}[\operatorname{Cot}[c]]]^2\right] \operatorname{Sec}[d x - \operatorname{ArcTan}[\operatorname{Cot}[c]]]\Big)$$
$$\operatorname{Sin}[c] \, (\operatorname{Cos}[d x] - i \operatorname{Sin}[d x]) \, (-i + \operatorname{Tan}[c + d x])$$

Problem 660: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \frac{a + i a \operatorname{Tan}[c + d x]}{(e \operatorname{Cos}[c + d x])^{3/2}} \, dx$$

Optimal (type 4, 89 leaves, 5 steps):

$$\frac{2 i a}{3 d (e \operatorname{Cos}[c + d x])^{3/2}} - \frac{2 a \operatorname{Cos}[c + d x]^{3/2} \operatorname{EllipticE}\left[\frac{1}{2} (c + d x), 2\right]}{d (e \operatorname{Cos}[c + d x])^{3/2}} + \frac{2 a \operatorname{Sin}[c + d x]}{d e \sqrt{e \operatorname{Cos}[c + d x]}}$$

Result (type 5, 203 leaves):

$$\Big(a e^{-i (c+3 d x)} (1 + e^{2 i c}) (-i + \operatorname{Cot}[c]) \Big(-3 - e^{2 i d x} - 5 e^{2 i (c+d x)} -$$
$$3 e^{2 i (c+2 d x)} + 3 (1 + e^{2 i (c+d x)})^{3/2} \operatorname{Hypergeometric2F1}\left[-\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, -e^{2 i (c+d x)}\right] +$$
$$e^{2 i d x} (1 + e^{2 i (c+d x)})^{3/2} \operatorname{Hypergeometric2F1}\left[\frac{1}{2}, \frac{3}{4}, \frac{7}{4}, -e^{2 i (c+d x)}\right]\Big)$$
$$\operatorname{Tan}[c] \, (-i + \operatorname{Tan}[c + d x])\Big) \Big/ \left(6 d e (-1 + e^{2 i c}) \sqrt{e \operatorname{Cos}[c + d x]}\right)$$

Problem 662: Result unnecessarily involves higher level functions.

$$\int \frac{a + i a \operatorname{Tan}[c + d x]}{(e \operatorname{Cos}[c + d x])^{7/2}} \, dx$$

Optimal (type 4, 130 leaves, 6 steps):

$$\frac{2\,i\,a}{7\,d\,\left(e\,\text{Cos}[c+d\,x]\right)^{7/2}}-\frac{6\,a\,\text{Cos}[c+d\,x]^{7/2}\,\text{EllipticE}\left[\frac{1}{2}\,(c+d\,x),2\right]}{5\,d\,\left(e\,\text{Cos}[c+d\,x]\right)^{7/2}}+\frac{2\,a\,\text{Cos}[c+d\,x]\,\text{Sin}[c+d\,x]}{5\,d\,\left(e\,\text{Cos}[c+d\,x]\right)^{7/2}}+\frac{6\,a\,\text{Cos}[c+d\,x]^{3}\,\text{Sin}[c+d\,x]}{5\,d\,\left(e\,\text{Cos}[c+d\,x]\right)^{7/2}}$$

Result (type 5, 245 leaves):

$$\left(\text{Cos}[c+d\,x]^{9/2}\left(-\left(\left(2\sqrt{2}\,e^{-i\,d\,x}\sqrt{1+e^{2\,i\,(c+d\,x)}}\,(-i+\text{Cot}[c])\left(3\,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,i\,(c+d\,x)}\right]+e^{2\,i\,d\,x}\,\text{Hypergeometric2F1}\left[\frac{1}{2},\frac{3}{4},\frac{7}{4},-e^{2\,i\,(c+d\,x)}\right]\right)\right)\Big/\left(5\sqrt{e^{-i\,(c+d\,x)}\left(1+e^{2\,i\,(c+d\,x)}\right)}\right)\right)+\left((-i+\text{Cot}[c])\,(63\,\text{Cos}[c]+77\,\text{Cos}[c+2\,d\,x]+7\,\text{Cos}[3\,c+2\,d\,x]+21\,\text{Cos}[3\,c+4\,d\,x]+40\,i\,\text{Sin}[c])\right)\Big/\left(70\,\text{Cos}[c+d\,x]^{7/2}\right)\right)(\text{Cos}[d\,x]-i\,\text{Sin}[d\,x])\,(a+i\,a\,\text{Tan}[c+d\,x])\right)\Big/\left(2\,d\,\left(e\,\text{Cos}[c+d\,x]\right)^{7/2}\right)$$

Problem 664: Result unnecessarily involves higher level functions.

$$\int\frac{\left(e\,\text{Cos}[c+d\,x]\right)^{5/2}}{\left(a+i\,a\,\text{Tan}[c+d\,x]\right)^{2}}\,dx$$

Optimal (type 4, 154 leaves, 6 steps):

$$\frac{42\,\left(e\,\text{Cos}[c+d\,x]\right)^{5/2}\,\text{EllipticE}\left[\frac{1}{2}\,(c+d\,x),2\right]}{65\,a^{2}\,d\,\text{Cos}[c+d\,x]^{5/2}}+\frac{2\,\text{Cos}[c+d\,x]\,\left(e\,\text{Cos}[c+d\,x]\right)^{5/2}\,\text{Sin}[c+d\,x]}{13\,a^{2}\,d}+\frac{14\,\left(e\,\text{Cos}[c+d\,x]\right)^{5/2}\,\text{Tan}[c+d\,x]}{65\,a^{2}\,d}+\frac{4\,i\,\text{Cos}[c+d\,x]^{2}\,\left(e\,\text{Cos}[c+d\,x]\right)^{5/2}}{13\,d\,\left(a^{2}+i\,a^{2}\,\text{Tan}[c+d\,x]\right)}$$

Result (type 5, 292 leaves):

$$-\frac{1}{1040\,a^2\,d\,\sqrt{e\,\text{Cos}[c+d\,x]}}\,e^3\,\text{Csc}[c]\,\left(\text{Cos}\left[2\,\left(c+d\,x\right)\right]-\mathrm{i}\,\text{Sin}\left[2\,\left(c+d\,x\right)\right]\right)\\\left(178\,\text{Cos}[d\,x]+158\,\text{Cos}[2\,c+d\,x]+169\,\text{Cos}[2\,c+3\,d\,x]+167\,\text{Cos}[4\,c+3\,d\,x]-9\,\text{Cos}[4\,c+5\,d\,x]+\right.\\9\,\text{Cos}[6\,c+5\,d\,x]-336\,e^{\mathrm{i}\,(2\,c+d\,x)}\,\sqrt{1+e^{2\,\mathrm{i}\,(c+d\,x)}}\,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,\mathrm{i}\,(c+d\,x)}\right]-\\112\,e^{2\,\mathrm{i}\,c+3\,\mathrm{i}\,d\,x}\,\sqrt{1+e^{2\,\mathrm{i}\,(c+d\,x)}}\,\text{Hypergeometric2F1}\left[\frac{1}{2},\frac{3}{4},\frac{7}{4},-e^{2\,\mathrm{i}\,(c+d\,x)}\right]+\\296\,\mathrm{i}\,\text{Sin}[d\,x]+40\,\mathrm{i}\,\text{Sin}[2\,c+d\,x]+204\,\mathrm{i}\,\text{Sin}[2\,c+3\,d\,x]+\\\left.132\,\mathrm{i}\,\text{Sin}[4\,c+3\,d\,x]-4\,\mathrm{i}\,\text{Sin}[4\,c+5\,d\,x]+4\,\mathrm{i}\,\text{Sin}[6\,c+5\,d\,x]\right)$$

Problem 666: Result unnecessarily involves higher level functions.

$$\int\frac{\sqrt{e\,\text{Cos}[c+d\,x]}}{\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^2}\,dx$$

Optimal (type 4, 120 leaves, 5 steps):

$$\frac{2\,\sqrt{e\,\text{Cos}[c+d\,x]}\,\text{EllipticE}\left[\frac{1}{2}\,\left(c+d\,x\right),2\right]}{3\,a^2\,d\,\sqrt{\text{Cos}[c+d\,x]}}+\frac{2\,\mathrm{i}\,\sqrt{e\,\text{Cos}[c+d\,x]}}{9\,d\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^2}+\frac{2\,\mathrm{i}\,\sqrt{e\,\text{Cos}[c+d\,x]}}{9\,d\,\left(a^2+\mathrm{i}\,a^2\,\text{Tan}[c+d\,x]\right)}$$

Result (type 5, 230 leaves):

$$-\frac{1}{36\,a^2\,d\,\sqrt{e\,\text{Cos}[c+d\,x]}}\\e\,\text{Csc}[c]\,\left(\text{Cos}\left[2\,\left(c+d\,x\right)\right]-\mathrm{i}\,\text{Sin}\left[2\,\left(c+d\,x\right)\right]\right)\,\left(7\,\text{Cos}[d\,x]+5\,\text{Cos}[2\,c+d\,x]+7\,\text{Cos}[2\,c+3\,d\,x]+\right.\\5\,\text{Cos}[4\,c+3\,d\,x]-12\,e^{\mathrm{i}\,(2\,c+d\,x)}\,\sqrt{1+e^{2\,\mathrm{i}\,(c+d\,x)}}\,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,\mathrm{i}\,(c+d\,x)}\right]-\\4\,e^{2\,\mathrm{i}\,c+3\,\mathrm{i}\,d\,x}\,\sqrt{1+e^{2\,\mathrm{i}\,(c+d\,x)}}\,\text{Hypergeometric2F1}\left[\frac{1}{2},\frac{3}{4},\frac{7}{4},-e^{2\,\mathrm{i}\,(c+d\,x)}\right]+\\\left.12\,\mathrm{i}\,\text{Sin}[d\,x]+8\,\mathrm{i}\,\text{Sin}[2\,c+3\,d\,x]+4\,\mathrm{i}\,\text{Sin}[4\,c+3\,d\,x]\right)$$

Problem 668: Result unnecessarily involves higher level functions.

$$\int\frac{1}{\left(e\,\text{Cos}[c+d\,x]\right)^{3/2}\,\left(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x]\right)^2}\,dx$$

Optimal (type 4, 92 leaves, 4 steps):

$$\frac{2\,\text{Cos}[c+d\,x]^{3/2}\,\text{EllipticE}\left[\frac{1}{2}\,\left(c+d\,x\right),2\right]}{5\,a^2\,d\,\left(e\,\text{Cos}[c+d\,x]\right)^{3/2}}+\frac{4\,\mathrm{i}\,\text{Cos}[c+d\,x]^2}{5\,d\,\left(e\,\text{Cos}[c+d\,x]\right)^{3/2}\,\left(a^2+\mathrm{i}\,a^2\,\text{Tan}[c+d\,x]\right)}$$

Result (type 5, 104 leaves):

$$\left(\mathrm{i}\, e^{-3\,\mathrm{i}\,(c+d\,x)}\left(1+e^{2\,\mathrm{i}\,(c+d\,x)}+2\,e^{2\,\mathrm{i}\,(c+d\,x)}\sqrt{1+e^{2\,\mathrm{i}\,(c+d\,x)}}\ \text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,\mathrm{i}\,(c+d\,x)}\right]\right)\right)\Big/\left(5\,a^2\,d\,e\,\sqrt{e\,\text{Cos}[c+d\,x]}\right)$$

Problem 670: Result unnecessarily involves higher level functions.

$$\int\frac{1}{(e\,\text{Cos}[c+d\,x])^{7/2}\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^2}\,dx$$

Optimal (type 4, 122 leaves, 5 steps):

$$\frac{6\,\text{Cos}[c+d\,x]^{7/2}\,\text{EllipticE}\left[\frac{1}{2}\,(c+d\,x),2\right]}{a^2\,d\,(e\,\text{Cos}[c+d\,x])^{7/2}}-\frac{6\,\text{Cos}[c+d\,x]^3\,\text{Sin}[c+d\,x]}{a^2\,d\,(e\,\text{Cos}[c+d\,x])^{7/2}}+\frac{4\,\mathrm{i}\,\text{Cos}[c+d\,x]^2}{d\,(e\,\text{Cos}[c+d\,x])^{7/2}\,\left(a^2+\mathrm{i}\,a^2\,\text{Tan}[c+d\,x]\right)}$$

Result (type 5, 103 leaves):

$$\left(2\,\mathrm{i}\,\sqrt{2}\,e^{-\mathrm{i}\,(c+d\,x)}\left(-1+3\,\sqrt{1+e^{2\,\mathrm{i}\,(c+d\,x)}}\ \text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2\,\mathrm{i}\,(c+d\,x)}\right]\right)\right)\Big/\left(a^2\,d\,e^3\,\sqrt{e\,e^{-\mathrm{i}\,(c+d\,x)}\left(1+e^{2\,\mathrm{i}\,(c+d\,x)}\right)}\right)$$

Problem 672: Result unnecessarily involves higher level functions.

$$\int\frac{1}{(e\,\text{Cos}[c+d\,x])^{11/2}\,(a+\mathrm{i}\,a\,\text{Tan}[c+d\,x])^2}\,dx$$

Optimal (type 4, 164 leaves, 6 steps):

$$-\frac{14\,\text{Cos}[c+d\,x]^{11/2}\,\text{EllipticE}\left[\frac{1}{2}\,(c+d\,x),2\right]}{5\,a^2\,d\,(e\,\text{Cos}[c+d\,x])^{11/2}}+\frac{14\,\text{Cos}[c+d\,x]^3\,\text{Sin}[c+d\,x]}{15\,a^2\,d\,(e\,\text{Cos}[c+d\,x])^{11/2}}+\frac{14\,\text{Cos}[c+d\,x]^5\,\text{Sin}[c+d\,x]}{5\,a^2\,d\,(e\,\text{Cos}[c+d\,x])^{11/2}}-\frac{4\,\mathrm{i}\,\text{Cos}[c+d\,x]^2}{3\,d\,(e\,\text{Cos}[c+d\,x])^{11/2}\,\left(a^2+\mathrm{i}\,a^2\,\text{Tan}[c+d\,x]\right)}$$

Result (type 5, 253 leaves):

$$\left(\text{Cos}[c+d x]^{7/2}\,\text{Csc}[c]\,(\text{Cos}[2 c]+i\,\text{Sin}[2 c])\,(\text{Cos}[d x]+i\,\text{Sin}[d x])^2\left(-\left(\left(14\sqrt{2}\,e^{-i d x}\sqrt{1+e^{2 i (c+d x)}}\left(3\,\text{Hypergeometric2F1}\left[-\frac{1}{4},\frac{1}{2},\frac{3}{4},-e^{2 i (c+d x)}\right]+e^{2 i d x}\,\text{Hypergeometric2F1}\left[\frac{1}{2},\frac{3}{4},\frac{7}{4},-e^{2 i (c+d x)}\right]\right)\right)\Big/\left(\sqrt{e^{-i (c+d x)}\left(1+e^{2 i (c+d x)}\right)}\right)\right)+\frac{1}{\text{Cos}[c+d x]^{5/2}}(36\,\text{Cos}[d x]+27\,\text{Cos}[2 c+d x]+21\,\text{Cos}[2 c+3 d x]+20\,i\,\text{Sin}[d x]-20\,i\,\text{Sin}[2 c+d x])\right)\right)\Big/\left(30\,d\,(e\,\text{Cos}[c+d x])^{11/2}\,(a+i\,a\,\text{Tan}[c+d x])^2\right)$$

Problem 677: Result is not expressed in closed-form.

$$\int\frac{\sqrt{a+i\,a\,\text{Tan}[c+d x]}}{\sqrt{e\,\text{Cos}[c+d x]}}\,dx$$

Optimal (type 3, 335 leaves, 10 steps):

$$\frac{i\sqrt{2}\sqrt{a}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\sqrt{e\,\text{Cos}[c+d x]}\sqrt{a+i\,a\,\text{Tan}[c+d x]}}{\sqrt{a}\sqrt{e}}\right]}{d\sqrt{e}}-\frac{i\sqrt{2}\sqrt{a}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\sqrt{e\,\text{Cos}[c+d x]}\sqrt{a+i\,a\,\text{Tan}[c+d x]}}{\sqrt{a}\sqrt{e}}\right]}{d\sqrt{e}}-\frac{1}{\sqrt{2}\,d\sqrt{e}}i\sqrt{a}\,\text{Log}\left[a\sqrt{e}-\sqrt{2}\sqrt{a}\sqrt{e\,\text{Cos}[c+d x]}\sqrt{a+i\,a\,\text{Tan}[c+d x]}+\sqrt{e}\,\text{Cos}[c+d x]\,(a+i\,a\,\text{Tan}[c+d x])\right]+\frac{1}{\sqrt{2}\,d\sqrt{e}}i\sqrt{a}\,\text{Log}\left[a\sqrt{e}+\sqrt{2}\sqrt{a}\sqrt{e\,\text{Cos}[c+d x]}\sqrt{a+i\,a\,\text{Tan}[c+d x]}+\sqrt{e}\,\text{Cos}[c+d x]\,(a+i\,a\,\text{Tan}[c+d x])\right]$$

Result (type 7, 111 leaves):

$$-\left(\left(e^{-\frac{1}{2} i (4 c+3 d x)}\left(1+e^{2 i (c+d x)}\right)\text{RootSum}\left[1+e^{2 i c}\,\#1^4\,\&,\frac{d x+2 i\,\text{Log}\left[e^{\frac{i d x}{2}}-\#1\right]}{\#1}\,\&\right]\sqrt{a+i\,a\,\text{Tan}[c+d x]}\right)\Big/\left(4\,d\sqrt{e\,\text{Cos}[c+d x]}\right)\right)$$

Problem 678: Result is not expressed in closed-form.

$$\int\frac{\sqrt{a+i\,a\,\text{Tan}[c+d x]}}{(e\,\text{Cos}[c+d x])^{3/2}}\,dx$$

Optimal (type 3, 524 leaves, 13 steps):

$$\frac{i\,a}{d\,\left(e\,\text{Cos}[c+d\,x]\right)^{3/2}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}-$$

$$\frac{i\,a^{3/2}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e\,\text{Cos}[c+d\,x]}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e}}\right]\,\text{Sec}[c+d\,x]}{\sqrt{2}\,d\,e^{3/2}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}+$$

$$\frac{i\,a^{3/2}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e\,\text{Cos}[c+d\,x]}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e}}\right]\,\text{Sec}[c+d\,x]}{\sqrt{2}\,d\,e^{3/2}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}+$$

$$\left(i\,a^{3/2}\,\text{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e\,\text{Cos}[c+d\,x]}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e}}+\text{Cos}[c+d\,x]\,\left(a-i\,a\,\text{Tan}[c+d\,x]\right)\right]\right.$$
$$\left.\text{Sec}[c+d\,x]\right)\Big/\left(2\,\sqrt{2}\,d\,e^{3/2}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)-$$

$$\left(i\,a^{3/2}\,\text{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e\,\text{Cos}[c+d\,x]}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e}}+\text{Cos}[c+d\,x]\,\left(a-i\,a\,\text{Tan}[c+d\,x]\right)\right]\right.$$
$$\left.\text{Sec}[c+d\,x]\right)\Big/\left(2\,\sqrt{2}\,d\,e^{3/2}\,\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)$$

Result (type 7, 135 leaves):

$$\left(e^{-\frac{3}{2}\,i\,(2\,c+d\,x)}\,\left(8\,i\,e^{\frac{1}{2}\,i\,(4\,c+d\,x)}-\left(1+e^{2\,i\,(c+d\,x)}\right)\,\text{RootSum}\left[1+e^{2\,i\,c}\,\#1^4\,\&,\,\frac{d\,x+2\,i\,\text{Log}\left[e^{\frac{i\,d\,x}{2}}-\#1\right]}{\#1^3}\,\&\right]\right)\right.$$
$$\left.\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)\Big/\left(8\,d\,e\,\sqrt{e\,\text{Cos}[c+d\,x]}\right)$$

Problem 679: Result is not expressed in closed-form.

$$\int\frac{\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\left(e\,\text{Cos}[c+d\,x]\right)^{5/2}}\,dx$$

Optimal (type 3, 512 leaves, 13 steps):

$$\frac{3\,i\,\sqrt{a}\,e^{5/2}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{4\,\sqrt{2}\,d\,(e\,\text{Cos}[c+d\,x])^{5/2}\,(e\,\text{Sec}[c+d\,x])^{5/2}}-\frac{3\,i\,\sqrt{a}\,e^{5/2}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\,\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{4\,\sqrt{2}\,d\,(e\,\text{Cos}[c+d\,x])^{5/2}\,(e\,\text{Sec}[c+d\,x])^{5/2}}-$$

$$\left(3\,i\,\sqrt{a}\,e^{5/2}\,\text{Log}\left[a-\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,(a+i\,a\,\text{Tan}[c+d\,x])\right]\right)\Big/$$
$$\left(8\,\sqrt{2}\,d\,(e\,\text{Cos}[c+d\,x])^{5/2}\,(e\,\text{Sec}[c+d\,x])^{5/2}\right)+$$
$$\left(3\,i\,\sqrt{a}\,e^{5/2}\,\text{Log}\left[a+\frac{\sqrt{2}\,\sqrt{a}\,\sqrt{e}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\,(a+i\,a\,\text{Tan}[c+d\,x])\right]\right)\Big/$$
$$\left(8\,\sqrt{2}\,d\,(e\,\text{Cos}[c+d\,x])^{5/2}\,(e\,\text{Sec}[c+d\,x])^{5/2}\right)+$$
$$\frac{i\,a}{2\,d\,(e\,\text{Cos}[c+d\,x])^{5/2}\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}-\frac{3\,i\,\text{Cos}[c+d\,x]^2\,\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{4\,d\,(e\,\text{Cos}[c+d\,x])^{5/2}}$$

Result (type 7, 186 leaves):

$$\left(\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\,\left(-\frac{1}{8\,\sqrt{2}}3\,e^{-\frac{1}{2}\,i\,(8\,c+7\,d\,x)}\,\left(1+e^{2\,i\,(c+d\,x)}\right)^3\right.\right.$$
$$\sqrt{e^{-i\,(c+d\,x)}\,\left(1+e^{2\,i\,(c+d\,x)}\right)}\,\text{RootSum}\left[1+e^{2\,i\,c}\,\#1^4\,\&,\,\frac{d\,x+2\,i\,\text{Log}\left[e^{\frac{i\,d\,x}{2}}-\#1\right]}{\#1}\,\&\right]+$$
$$\left.\left.4\,\text{Cos}[c+d\,x]^{5/2}\,(-i+2\,\text{Tan}[c+d\,x])\right)\right)\Big/\left(16\,d\,\sqrt{\text{Cos}[c+d\,x]}\,(e\,\text{Cos}[c+d\,x])^{5/2}\right)$$

Problem 680: Result is not expressed in closed-form.

$$\int\frac{\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{(e\,\text{Cos}[c+d\,x])^{7/2}}\,dx$$

Optimal (type 3, 719 leaves, 15 steps):

$$\frac{i a}{3 d \left(e \text{Cos}[c+d x]\right)^{7/2} \sqrt{a+i a \text{Tan}[c+d x]}}+\frac{5 i a \text{Cos}[c+d x]^2}{8 d \left(e \text{Cos}[c+d x]\right)^{7/2} \sqrt{a+i a \text{Tan}[c+d x]}}-$$

$$\left(5 i a^{3/2} e^{7/2} \text{ArcTan}\left[1-\frac{\sqrt{2} \sqrt{e} \sqrt{a-i a \text{Tan}[c+d x]}}{\sqrt{a} \sqrt{e \text{Sec}[c+d x]}}\right] \text{Sec}[c+d x]\right) \Big/$$

$$\left(8 \sqrt{2} d \left(e \text{Cos}[c+d x]\right)^{7/2} \left(e \text{Sec}[c+d x]\right)^{7/2} \sqrt{a-i a \text{Tan}[c+d x]} \sqrt{a+i a \text{Tan}[c+d x]}\right)+$$

$$\left(5 i a^{3/2} e^{7/2} \text{ArcTan}\left[1+\frac{\sqrt{2} \sqrt{e} \sqrt{a-i a \text{Tan}[c+d x]}}{\sqrt{a} \sqrt{e \text{Sec}[c+d x]}}\right] \text{Sec}[c+d x]\right) \Big/$$

$$\left(8 \sqrt{2} d \left(e \text{Cos}[c+d x]\right)^{7/2} \left(e \text{Sec}[c+d x]\right)^{7/2} \sqrt{a-i a \text{Tan}[c+d x]} \sqrt{a+i a \text{Tan}[c+d x]}\right)+$$

$$\left(5 i a^{3/2} e^{7/2} \text{Log}\left[a-\frac{\sqrt{2} \sqrt{a} \sqrt{e} \sqrt{a-i a \text{Tan}[c+d x]}}{\sqrt{e \text{Sec}[c+d x]}}+\text{Cos}[c+d x] \left(a-i a \text{Tan}[c+d x]\right)\right]\right.$$

$$\left.\text{Sec}[c+d x]\right) \Big/ \left(16 \sqrt{2} d \left(e \text{Cos}[c+d x]\right)^{7/2} \left(e \text{Sec}[c+d x]\right)^{7/2}\right.$$

$$\left.\sqrt{a-i a \text{Tan}[c+d x]} \sqrt{a+i a \text{Tan}[c+d x]}\right)-\left(5 i a^{3/2} e^{7/2}\right.$$

$$\left.\text{Log}\left[a+\frac{\sqrt{2} \sqrt{a} \sqrt{e} \sqrt{a-i a \text{Tan}[c+d x]}}{\sqrt{e \text{Sec}[c+d x]}}+\text{Cos}[c+d x] \left(a-i a \text{Tan}[c+d x]\right)\right] \text{Sec}[c+d x]\right) \Big/$$

$$\left(16 \sqrt{2} d \left(e \text{Cos}[c+d x]\right)^{7/2} \left(e \text{Sec}[c+d x]\right)^{7/2} \sqrt{a-i a \text{Tan}[c+d x]} \sqrt{a+i a \text{Tan}[c+d x]}\right)-$$

$$\frac{5 i \text{Cos}[c+d x]^2 \sqrt{a+i a \text{Tan}[c+d x]}}{12 d \left(e \text{Cos}[c+d x]\right)^{7/2}}$$

Result (type 7, 306 leaves):

$$\left(e^{-\frac{1}{2} i (4 c+d x)} \sqrt{e \text{Cos}[c+d x]} \left(-15 \sqrt{e^{i d x}} \sqrt{\frac{e^{i (c+d x)}}{1+e^{2 i (c+d x)}}} \sqrt{e^{-i (c+d x)} \left(1+e^{2 i (c+d x)}\right)}\right.\right.$$

$$\text{RootSum}\left[1+e^{2 i c} \#1^4 \&, \frac{d x+2 i \text{Log}\left[e^{\frac{i d x}{2}}-\#1\right]}{\#1^3} \&\right]-\frac{1}{\left(1+e^{2 i (c+d x)}\right)^3}$$

$$\left.8 i e^{\frac{1}{2} i (4 c+d x)} \sqrt{e^{i d x}} \left(-15-42 e^{2 i (c+d x)}+5 e^{4 i (c+d x)}\right) \sqrt{\text{Cos}[c+d x]} \sqrt{\text{Sec}[c+d x]}\right)$$

$$\left.\sqrt{a+i a \text{Tan}[c+d x]}\right) \Big/ \left(96 d e^4 \text{Cos}[c+d x]^{5/2} \text{Sec}[c+d x]^{5/2} \sqrt{\text{Cos}[d x]+i \text{Sin}[d x]}\right)$$

Problem 685: Result is not expressed in closed-form.

$$\int \frac{1}{\left(e \text{Cos}[c+d x]\right)^{3/2} \sqrt{a+i a \text{Tan}[c+d x]}} \, dx$$

Optimal (type 3, 495 leaves, 11 steps):

$$-\frac{i\sqrt{2}\sqrt{a}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\sqrt{e\,\text{Cos}[c+d\,x]}\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\sqrt{e}}\right]\text{Sec}[c+d\,x]}{d\,e^{3/2}\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}+\frac{i\sqrt{2}\sqrt{a}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\sqrt{e\,\text{Cos}[c+d\,x]}\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\sqrt{e}}\right]\text{Sec}[c+d\,x]}{d\,e^{3/2}\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}+$$
$$\left(i\sqrt{a}\,\text{Log}\left[a\sqrt{e}-\sqrt{2}\sqrt{a}\sqrt{e\,\text{Cos}[c+d\,x]}\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}+\sqrt{e}\,\text{Cos}[c+d\,x]\left(a-i\,a\,\text{Tan}[c+d\,x]\right)\right]\text{Sec}[c+d\,x]\right)\Big/$$
$$\left(\sqrt{2}\,d\,e^{3/2}\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)-$$
$$\left(i\sqrt{a}\,\text{Log}\left[a\sqrt{e}+\sqrt{2}\sqrt{a}\sqrt{e\,\text{Cos}[c+d\,x]}\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}+\sqrt{e}\,\text{Cos}[c+d\,x]\left(a-i\,a\,\text{Tan}[c+d\,x]\right)\right]\text{Sec}[c+d\,x]\right)\Big/$$
$$\left(\sqrt{2}\,d\,e^{3/2}\sqrt{a-i\,a\,\text{Tan}[c+d\,x]}\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}\right)$$

Result (type 7, 100 leaves) :

$$-\frac{e^{\frac{1}{2}i(-2c+d\,x)}\,\text{RootSum}\left[1+e^{2\,i\,c}\,\#1^4\,\&,\ \frac{d\,x+2\,i\,\text{Log}\left[e^{\frac{i\,d\,x}{2}}-\#1\right]}{\#1^3}\,\&\right]}{2\,d\,e\sqrt{e\,\text{Cos}[c+d\,x]}\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}$$

Problem 686: Result is not expressed in closed-form.

$$\int\frac{1}{(e\,\text{Cos}[c+d\,x])^{5/2}\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}\,dx$$

Optimal (type 3, 470 leaves, 12 steps) :

$$\frac{i\,e^{5/2}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\sqrt{e}\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{\sqrt{2}\sqrt{a}\,d\,(e\,\text{Cos}[c+d\,x])^{5/2}(e\,\text{Sec}[c+d\,x])^{5/2}}-\frac{i\,e^{5/2}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\sqrt{e}\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{a}\sqrt{e\,\text{Sec}[c+d\,x]}}\right]}{\sqrt{2}\sqrt{a}\,d\,(e\,\text{Cos}[c+d\,x])^{5/2}(e\,\text{Sec}[c+d\,x])^{5/2}}-$$
$$\left(i\,e^{5/2}\,\text{Log}\left[a-\frac{\sqrt{2}\sqrt{a}\sqrt{e}\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\left(a+i\,a\,\text{Tan}[c+d\,x]\right)\right]\right)\Big/$$
$$\left(2\sqrt{2}\sqrt{a}\,d\,(e\,\text{Cos}[c+d\,x])^{5/2}(e\,\text{Sec}[c+d\,x])^{5/2}\right)+$$
$$\left(i\,e^{5/2}\,\text{Log}\left[a+\frac{\sqrt{2}\sqrt{a}\sqrt{e}\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{\sqrt{e\,\text{Sec}[c+d\,x]}}+\text{Cos}[c+d\,x]\left(a+i\,a\,\text{Tan}[c+d\,x]\right)\right]\right)\Big/$$
$$\left(2\sqrt{2}\sqrt{a}\,d\,(e\,\text{Cos}[c+d\,x])^{5/2}(e\,\text{Sec}[c+d\,x])^{5/2}\right)-\frac{i\,\text{Cos}[c+d\,x]^2\sqrt{a+i\,a\,\text{Tan}[c+d\,x]}}{a\,d\,(e\,\text{Cos}[c+d\,x])^{5/2}}$$

Result (type 7, 136 leaves) :

$$-\left(\left(\left(\text{Cos}\left[\frac{d x}{2}\right]+\text{i} \,\text{Sin}\left[\frac{d x}{2}\right]\right)\left(4\,\text{i}\,\text{Cos}\left[c+\frac{d x}{2}\right]+\text{Cos}[c+d x]\,\text{RootSum}\left[1+e^{2 i c}\,\sharp 1^4\,\&,\ \frac{d x+2\,\text{i}\,\text{Log}\left[e^{\frac{i d x}{2}}-\sharp 1\right]}{\sharp 1}\,\&\right]-4\,\text{Sin}\left[c+\frac{d x}{2}\right]\right)\right)\Big/\left(4\,d\,e\,(e\,\text{Cos}[c+d x])^{3/2}\sqrt{a+\text{i}\,a\,\text{Tan}[c+d x]}\right)\right)$$

Problem 687: Result is not expressed in closed-form.

$$\int \frac{1}{(e\,\text{Cos}[c+d x])^{7/2}\sqrt{a+\text{i}\,a\,\text{Tan}[c+d x]}}\,dx$$

Optimal (type 3, 682 leaves, 14 steps):

$$\frac{3\,\text{i}\,\text{Cos}[c+d x]^2}{4\,d\,(e\,\text{Cos}[c+d x])^{7/2}\sqrt{a+\text{i}\,a\,\text{Tan}[c+d x]}}-\left(3\,\text{i}\sqrt{a}\,e^{7/2}\,\text{ArcTan}\left[1-\frac{\sqrt{2}\sqrt{e}\sqrt{a-\text{i}\,a\,\text{Tan}[c+d x]}}{\sqrt{a}\sqrt{e\,\text{Sec}[c+d x]}}\right]\text{Sec}[c+d x]\right)\Big/\left(4\sqrt{2}\,d\,(e\,\text{Cos}[c+d x])^{7/2}(e\,\text{Sec}[c+d x])^{7/2}\sqrt{a-\text{i}\,a\,\text{Tan}[c+d x]}\sqrt{a+\text{i}\,a\,\text{Tan}[c+d x]}\right)+\left(3\,\text{i}\sqrt{a}\,e^{7/2}\,\text{ArcTan}\left[1+\frac{\sqrt{2}\sqrt{e}\sqrt{a-\text{i}\,a\,\text{Tan}[c+d x]}}{\sqrt{a}\sqrt{e\,\text{Sec}[c+d x]}}\right]\text{Sec}[c+d x]\right)\Big/\left(4\sqrt{2}\,d\,(e\,\text{Cos}[c+d x])^{7/2}(e\,\text{Sec}[c+d x])^{7/2}\sqrt{a-\text{i}\,a\,\text{Tan}[c+d x]}\sqrt{a+\text{i}\,a\,\text{Tan}[c+d x]}\right)+\left(3\,\text{i}\sqrt{a}\,e^{7/2}\,\text{Log}\left[a-\frac{\sqrt{2}\sqrt{a}\sqrt{e}\sqrt{a-\text{i}\,a\,\text{Tan}[c+d x]}}{\sqrt{e\,\text{Sec}[c+d x]}}+\text{Cos}[c+d x]\,(a-\text{i}\,a\,\text{Tan}[c+d x])\right]\text{Sec}[c+d x]\right)\Big/\left(8\sqrt{2}\,d\,(e\,\text{Cos}[c+d x])^{7/2}(e\,\text{Sec}[c+d x])^{7/2}\sqrt{a-\text{i}\,a\,\text{Tan}[c+d x]}\sqrt{a+\text{i}\,a\,\text{Tan}[c+d x]}\right)-\left(3\,\text{i}\sqrt{a}\,e^{7/2}\,\text{Log}\left[a+\frac{\sqrt{2}\sqrt{a}\sqrt{e}\sqrt{a-\text{i}\,a\,\text{Tan}[c+d x]}}{\sqrt{e\,\text{Sec}[c+d x]}}+\text{Cos}[c+d x]\,(a-\text{i}\,a\,\text{Tan}[c+d x])\right]\text{Sec}[c+d x]\right)\Big/\left(8\sqrt{2}\,d\,(e\,\text{Cos}[c+d x])^{7/2}(e\,\text{Sec}[c+d x])^{7/2}\sqrt{a-\text{i}\,a\,\text{Tan}[c+d x]}\sqrt{a+\text{i}\,a\,\text{Tan}[c+d x]}\right)-\frac{\text{i}\,\text{Cos}[c+d x]^2\sqrt{a+\text{i}\,a\,\text{Tan}[c+d x]}}{2\,a\,d\,(e\,\text{Cos}[c+d x])^{7/2}}$$

Result (type 7, 165 leaves):

$$-\left(\left(e^{\frac{1}{2}i(-2c+dx)}\left(8\,i\,e^{\frac{1}{2}i(4c+dx)}\left(-3+e^{2i(c+dx)}\right)+3\left(1+e^{2i(c+dx)}\right)^2\text{RootSum}\left[1+e^{2ic}\,\#1^4\,\&,\frac{dx+2\,i\,\text{Log}\left[e^{\frac{idx}{2}}-\#1\right]}{\#1^3}\,\&\right]\right)\right)\Big/\left(16\,d\,e^3\left(1+e^{2i(c+dx)}\right)^2\sqrt{e\,\text{Cos}[c+dx]}\,\sqrt{a+i\,a\,\text{Tan}[c+dx]}\right)\right)$$

Problem 691: Result more than twice size of optimal antiderivative.

$$\int\frac{(e\,\text{Cos}[c+dx])^m}{a+i\,a\,\text{Tan}[c+dx]}\,dx$$

Optimal (type 5, 86 leaves, 5 steps):

$$-\frac{1}{a\,d\,m}i\,2^{-1-\frac{m}{2}}(e\,\text{Cos}[c+dx])^m\,\text{Hypergeometric2F1}\left[-\frac{m}{2},\frac{4+m}{2},1-\frac{m}{2},\frac{1}{2}(1-i\,\text{Tan}[c+dx])\right](1+i\,\text{Tan}[c+dx])^{m/2}$$

Result (type 5, 201 leaves):

$$\left(2^{-1-m}e^{-i(c+2dx)}\left(1+e^{2i(c+dx)}\right)^{-m}\left(e^{-i(c+dx)}\left(1+e^{2i(c+dx)}\right)\right)^m\text{Cos}[c+dx]^{-1-m}(e\,\text{Cos}[c+dx])^m\left(m\,\text{Hypergeometric2F1}\left[-1-\frac{m}{2},-m,-\frac{m}{2},-e^{2i(c+dx)}\right]+e^{2i(c+dx)}(2+m)\,\text{Hypergeometric2F1}\left[-m,-\frac{m}{2},1-\frac{m}{2},-e^{2i(c+dx)}\right]\right)(\text{Cos}[dx]+i\,\text{Sin}[dx])\right)\Big/\left(a\,d\,m\,(2+m)\,(-i+\text{Tan}[c+dx])\right)$$

Problem 692: Result more than twice size of optimal antiderivative.

$$\int\frac{(e\,\text{Cos}[c+dx])^m}{(a+i\,a\,\text{Tan}[c+dx])^2}\,dx$$

Optimal (type 5, 86 leaves, 5 steps):

$$-\frac{1}{a^2\,d\,m}i\,2^{-2-\frac{m}{2}}(e\,\text{Cos}[c+dx])^m\,\text{Hypergeometric2F1}\left[-\frac{m}{2},\frac{6+m}{2},1-\frac{m}{2},\frac{1}{2}(1-i\,\text{Tan}[c+dx])\right](1+i\,\text{Tan}[c+dx])^{m/2}$$

Result (type 5, 264 leaves):

$$-\frac{1}{a^2\,d\,m\,(2+m)\,(4+m)\,(-i+\mathrm{Tan}[c+d\,x])^2}\,i\,2^{-2-m}\,e^{-2\,i\,(c+2\,d\,x)}\,\left(1+e^{2\,i\,(c+d\,x)}\right)^{-m}\,\left(e^{-i\,(c+d\,x)}\,\left(1+e^{2\,i\,(c+d\,x)}\right)\right)^m\,\mathrm{Cos}[c+d\,x]^{-2-m}\,(e\,\mathrm{Cos}[c+d\,x])^m\,\left(m\,(2+m)\,\mathrm{Hypergeometric2F1}\left[-2-\frac{m}{2},\,-m,\,-1-\frac{m}{2},\,-e^{2\,i\,(c+d\,x)}\right]+e^{2\,i\,(c+d\,x)}\,(4+m)\,\left(2\,m\,\mathrm{Hypergeometric2F1}\left[-1-\frac{m}{2},\,-m,\,-\frac{m}{2},\,-e^{2\,i\,(c+d\,x)}\right]+e^{2\,i\,(c+d\,x)}\,(2+m)\,\mathrm{Hypergeometric2F1}\left[-m,\,-\frac{m}{2},\,1-\frac{m}{2},\,-e^{2\,i\,(c+d\,x)}\right]\right)\right)\,(\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x])^2$$

Problem 694: Result more than twice size of optimal antiderivative.

$$\int\frac{(e\,\mathrm{Cos}[c+d\,x])^m}{\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}}\,dx$$

Optimal (type 5, 104 leaves, 5 steps):

$$-\left(\left(i\,2^{-\frac{1}{2}-\frac{m}{2}}\,(e\,\mathrm{Cos}[c+d\,x])^m\,\mathrm{Hypergeometric2F1}\left[-\frac{m}{2},\,\frac{3+m}{2},\,1-\frac{m}{2},\,\frac{1}{2}\,(1-i\,\mathrm{Tan}[c+d\,x])\right]\,(1+i\,\mathrm{Tan}[c+d\,x])^{\frac{1+m}{2}}\right)\Big/\left(d\,m\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}\right)\right)$$

Result (type 5, 215 leaves):

$$\left(i\,2^{-\frac{1}{2}-m}\,\left(1+e^{2\,i\,(c+d\,x)}\right)^{-\frac{1}{2}-m}\,\left(e^{-i\,(c+d\,x)}\,\left(1+e^{2\,i\,(c+d\,x)}\right)\right)^m\,\mathrm{Cos}[c+d\,x]^{-m}\,(e\,\mathrm{Cos}[c+d\,x])^m\,\mathrm{Hypergeometric2F1}\left[\frac{1}{2}\,(-1-m),\,-\frac{1}{2}-m,\,\frac{1-m}{2},\,-e^{2\,i\,(c+d\,x)}\right]\,\sqrt{\mathrm{Sec}[c+d\,x]}\,\sqrt{\mathrm{Cos}[d\,x]+i\,\mathrm{Sin}[d\,x]}\right)\Big/\left(d\,\sqrt{e^{i\,d\,x}}\,\sqrt{\frac{e^{i\,(c+d\,x)}}{1+e^{2\,i\,(c+d\,x)}}}\,(1+m)\,\sqrt{a+i\,a\,\mathrm{Tan}[c+d\,x]}\right)$$

Problem 696: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int(d\,\mathrm{Cos}[e+f\,x])^m\,(a+b\,\mathrm{Tan}[e+f\,x])^2\,dx$$

Optimal (type 5, 155 leaves, 5 steps):

$$-\frac{a\,b\,(2-m)\,(d\,\mathrm{Cos}[e+f\,x])^m}{f\,(1-m)\,m}+\left(\left(b^2-a^2\,(1-m)\right)\,\mathrm{Cos}[e+f\,x]\,(d\,\mathrm{Cos}[e+f\,x])^m\,\mathrm{Hypergeometric2F1}\left[\frac{1}{2},\,\frac{1+m}{2},\,\frac{3+m}{2},\,\mathrm{Cos}[e+f\,x]^2\right]\,\mathrm{Sin}[e+f\,x]\right)\Big/\left(f\,(1-m)\,(1+m)\,\sqrt{\mathrm{Sin}[e+f\,x]^2}\right)+\frac{b\,(d\,\mathrm{Cos}[e+f\,x])^m\,(a+b\,\mathrm{Tan}[e+f\,x])}{f\,(1-m)}$$

Result (type 5, 465 leaves):

$$-\Bigg(\Bigg(i\,a\,b\,\mathrm{Cos}[e+f\,x]^{2-m}\,(d\,\mathrm{Cos}[e+f\,x])^m\,\Bigg(\frac{1}{-2+m}\,i\,2^{1-m}\,e^{2\,i\,(e+f\,x)}\,\left(e^{-i\,(e+f\,x)}+e^{i\,(e+f\,x)}\right)^m\,\left(1+e^{2\,i\,(e+f\,x)}\right)^{-m}\,\mathrm{Hypergeometric2F1}\Big[1-m,\,1-\frac{m}{2},\,2-\frac{m}{2},\,-e^{2\,i\,(e+f\,x)}\Big]-\frac{1}{m}\,i\,2^{1-m}\,\left(e^{-i\,(e+f\,x)}+e^{i\,(e+f\,x)}\right)^m\,\left(1+e^{2\,i\,(e+f\,x)}\right)^{-m}\,\mathrm{Hypergeometric2F1}\Big[1-m,\,-\frac{m}{2},\,1-\frac{m}{2},\,-e^{2\,i\,(e+f\,x)}\Big]\Bigg)\,(a+b\,\mathrm{Tan}[e+f\,x])^2\Bigg)\Big/\left(f\,(a\,\mathrm{Cos}[e+f\,x]+b\,\mathrm{Sin}[e+f\,x])^2\right)\Bigg)-\left(b^2\,\mathrm{Cos}[e+f\,x]\,(d\,\mathrm{Cos}[e+f\,x])^m\,\mathrm{Hypergeometric2F1}\Big[-\frac{1}{2},\,\frac{1}{2}\,(-1+m),\,\frac{1+m}{2},\,\mathrm{Cos}[e+f\,x]^2\Big]\,\mathrm{Sin}[e+f\,x]^3\,(a+b\,\mathrm{Tan}[e+f\,x])^2\right)\Big/\left(f\,(-1+m)\,\left(\mathrm{Sin}[e+f\,x]^2\right)^{3/2}\,(a\,\mathrm{Cos}[e+f\,x]+b\,\mathrm{Sin}[e+f\,x])^2\right)-\left(a^2\,\mathrm{Cos}[e+f\,x]^3\,(d\,\mathrm{Cos}[e+f\,x])^m\,\mathrm{Hypergeometric2F1}\Big[\frac{1}{2},\,\frac{1+m}{2},\,\frac{3+m}{2},\,\mathrm{Cos}[e+f\,x]^2\Big]\,\mathrm{Sin}[e+f\,x]\,(a+b\,\mathrm{Tan}[e+f\,x])^2\right)\Big/\left(f\,(1+m)\,\sqrt{\mathrm{Sin}[e+f\,x]^2}\,(a\,\mathrm{Cos}[e+f\,x]+b\,\mathrm{Sin}[e+f\,x])^2\right)$$

Problem 697: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int(d\,\mathrm{Cos}[e+f\,x])^m\,(a+b\,\mathrm{Tan}[e+f\,x])\,dx$$

Optimal (type 5, 90 leaves, 4 steps):

$$-\frac{b\,(d\,\mathrm{Cos}[e+f\,x])^m}{f\,m}-\left(a\,(d\,\mathrm{Cos}[e+f\,x])^{1+m}\,\mathrm{Hypergeometric2F1}\Big[\frac{1}{2},\,\frac{1+m}{2},\,\frac{3+m}{2},\,\mathrm{Cos}[e+f\,x]^2\Big]\,\mathrm{Sin}[e+f\,x]\right)\Big/\left(d\,f\,(1+m)\,\sqrt{\mathrm{Sin}[e+f\,x]^2}\right)$$

Result (type 5, 297 leaves):

$$\frac{1}{f\,(-2+m)\,m\,(1+m)\,\sqrt{\text{Sin}[e+f\,x]^2}\,\left(a\,\text{Cos}[e+f\,x]+b\,\text{Sin}[e+f\,x]\right)} 2^{-m}\left(1+e^{2\,i\,(e+f\,x)}\right)^{-m}\text{Cos}[e+f\,x]^{1-m}\,\left(d\,\text{Cos}[e+f\,x]\right)^m \left(-2^m\,a\,\left(1+e^{2\,i\,(e+f\,x)}\right)^m\,(-2+m)\,m\,\text{Cos}[e+f\,x]^{1+m}\,\text{Hypergeometric2F1}\left[\frac{1}{2},\frac{1+m}{2},\frac{3+m}{2},\text{Cos}[e+f\,x]^2\right]\,\text{Sin}[e+f\,x]+b\,\left(e^{-i\,(e+f\,x)}\,\left(1+e^{2\,i\,(e+f\,x)}\right)\right)^m\,(1+m)\left(e^{2\,i\,(e+f\,x)}\,m\,\text{Hypergeometric2F1}\left[1-m,1-\frac{m}{2},2-\frac{m}{2},-e^{2\,i\,(e+f\,x)}\right]-(-2+m)\,\text{Hypergeometric2F1}\left[1-m,-\frac{m}{2},1-\frac{m}{2},-e^{2\,i\,(e+f\,x)}\right]\right)\sqrt{\text{Sin}[e+f\,x]^2}\right)\left(a+b\,\text{Tan}[e+f\,x]\right)$$

Problem 698: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\frac{\left(d\,\text{Cos}[e+f\,x]\right)^m}{a+b\,\text{Tan}[e+f\,x]}\,dx$$

Optimal (type 6, 140 leaves, 7 steps):

$$\frac{b\,\left(d\,\text{Cos}[e+f\,x]\right)^m\,\text{Hypergeometric2F1}\left[1,-\frac{m}{2},1-\frac{m}{2},\frac{b^2\,\text{Sec}[e+f\,x]^2}{a^2+b^2}\right]}{\left(a^2+b^2\right)\,f\,m}+\frac{1}{a\,f}\text{AppellF1}\left[\frac{1}{2},1,\frac{2+m}{2},\frac{3}{2},\frac{b^2\,\text{Tan}[e+f\,x]^2}{a^2},-\text{Tan}[e+f\,x]^2\right]\left(d\,\text{Cos}[e+f\,x]\right)^m\,\left(\text{Sec}[e+f\,x]^2\right)^{m/2}\,\text{Tan}[e+f\,x]$$

Result (type 6, 1132 leaves):

$$\Bigg((d\,\mathrm{Cos}[e+f\,x])^m \Bigg(b\left(-1+\left(\mathrm{Sec}[e+f\,x]^2\right)^{-m/2}\right)+a\,m\,\mathrm{Hypergeometric2F1}\left[\frac{1}{2},1+\frac{m}{2},\frac{3}{2},-\mathrm{Tan}[e+f\,x]^2\right]\mathrm{Tan}[e+f\,x]-b\,\mathrm{AppellF1}\left[m,\frac{m}{2},\frac{m}{2},1+m,\frac{a-\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{-m/2}\left(\frac{b\,(-\mathrm{i}+\mathrm{Tan}[e+f\,x])}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{m/2}\left(\frac{b\,(\mathrm{i}+\mathrm{Tan}[e+f\,x])}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{m/2}\Bigg)\Bigg)\Big/$$

$$\Bigg(f\,(a+b\,\mathrm{Tan}[e+f\,x])\Bigg(a\,m\,\mathrm{Hypergeometric2F1}\left[\frac{1}{2},1+\frac{m}{2},\frac{3}{2},-\mathrm{Tan}[e+f\,x]^2\right]\mathrm{Sec}[e+f\,x]^2-b\,m\left(\mathrm{Sec}[e+f\,x]^2\right)^{-m/2}\mathrm{Tan}[e+f\,x]+b\,m\,\mathrm{AppellF1}\left[m,\frac{m}{2},\frac{m}{2},1+m,\frac{a-\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{-m/2}\mathrm{Tan}[e+f\,x]\left(\frac{b\,(-\mathrm{i}+\mathrm{Tan}[e+f\,x])}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{m/2}\left(\frac{b\,(\mathrm{i}+\mathrm{Tan}[e+f\,x])}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{m/2}-$$

$$b\left(\mathrm{Sec}[e+f\,x]^2\right)^{-m/2}\left(\frac{b\,(-\mathrm{i}+\mathrm{Tan}[e+f\,x])}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{m/2}\left(\frac{b\,(\mathrm{i}+\mathrm{Tan}[e+f\,x])}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{m/2}\Bigg(-\Bigg(\Bigg((a-\mathrm{i}\,b)\,b\,m^2\,\mathrm{AppellF1}\left[1+m,1+\frac{m}{2},\frac{m}{2},2+m,\frac{a-\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]\mathrm{Sec}[e+f\,x]^2\Bigg)\Big/\left(2\,(1+m)\,(a+b\,\mathrm{Tan}[e+f\,x])^2\right)\Bigg)-$$

$$\Bigg((a+\mathrm{i}\,b)\,b\,m^2\,\mathrm{AppellF1}\left[1+m,\frac{m}{2},1+\frac{m}{2},2+m,\frac{a-\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]\mathrm{Sec}[e+f\,x]^2\Bigg)\Big/\left(2\,(1+m)\,(a+b\,\mathrm{Tan}[e+f\,x])^2\right)\Bigg)-$$

$$\frac{1}{2}\,b\,m\,\mathrm{AppellF1}\left[m,\frac{m}{2},\frac{m}{2},1+m,\frac{a-\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{-m/2}\left(\frac{b\,(-\mathrm{i}+\mathrm{Tan}[e+f\,x])}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{-1+\frac{m}{2}}\left(\frac{b\,(\mathrm{i}+\mathrm{Tan}[e+f\,x])}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{m/2}\left(-\frac{b^2\,\mathrm{Sec}[e+f\,x]^2\,(-\mathrm{i}+\mathrm{Tan}[e+f\,x])}{(a+b\,\mathrm{Tan}[e+f\,x])^2}+\frac{b\,\mathrm{Sec}[e+f\,x]^2}{a+b\,\mathrm{Tan}[e+f\,x]}\right)-$$

$$\frac{1}{2}\,b\,m\,\mathrm{AppellF1}\left[m,\frac{m}{2},\frac{m}{2},1+m,\frac{a-\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]},\frac{a+\mathrm{i}\,b}{a+b\,\mathrm{Tan}[e+f\,x]}\right]\left(\mathrm{Sec}[e+f\,x]^2\right)^{-m/2}\left(\frac{b\,(-\mathrm{i}+\mathrm{Tan}[e+f\,x])}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{m/2}\left(\frac{b\,(\mathrm{i}+\mathrm{Tan}[e+f\,x])}{a+b\,\mathrm{Tan}[e+f\,x]}\right)^{-1+\frac{m}{2}}\left(-\frac{b^2\,\mathrm{Sec}[e+f\,x]^2\,(\mathrm{i}+\mathrm{Tan}[e+f\,x])}{(a+b\,\mathrm{Tan}[e+f\,x])^2}+\frac{b\,\mathrm{Sec}[e+f\,x]^2}{a+b\,\mathrm{Tan}[e+f\,x]}\right)+a\,m\,\mathrm{Sec}[e+f\,x]^2\left(-\mathrm{Hypergeometric2F1}\left[\frac{1}{2},1+\frac{m}{2},\frac{3}{2},-\mathrm{Tan}[e+f\,x]^2\right]+\left(1+\mathrm{Tan}[e+f\,x]^2\right)^{-1-\frac{m}{2}}\right)\Bigg)\Bigg)$$

Problem 699: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{(d \operatorname{Cos}[e+f x])^m}{(a+b \operatorname{Tan}[e+f x])^2} \, dx$$

Optimal (type 6, 227 leaves, 8 steps):

$$\frac{2 a b (d \operatorname{Cos}[e+f x])^m \operatorname{Hypergeometric2F1}\left[2,-\frac{m}{2},1-\frac{m}{2},\frac{b^2 \operatorname{Sec}[e+f x]^2}{a^2+b^2}\right]}{\left(a^2+b^2\right)^2 f m}+\frac{1}{a^2 f} \operatorname{AppellF1}\left[\frac{1}{2},2,\frac{2+m}{2},\frac{3}{2},\frac{b^2 \operatorname{Tan}[e+f x]^2}{a^2},-\operatorname{Tan}[e+f x]^2\right] (d \operatorname{Cos}[e+f x])^m \left(\operatorname{Sec}[e+f x]^2\right)^{m/2} \operatorname{Tan}[e+f x]+\frac{1}{3 a^4 f} b^2 \operatorname{AppellF1}\left[\frac{3}{2},2,\frac{2+m}{2},\frac{5}{2},\frac{b^2 \operatorname{Tan}[e+f x]^2}{a^2},-\operatorname{Tan}[e+f x]^2\right] (d \operatorname{Cos}[e+f x])^m \left(\operatorname{Sec}[e+f x]^2\right)^{m/2} \operatorname{Tan}[e+f x]^3$$

Result (type 6, 361 leaves):

$$-\left(\left(2 (4+m) \operatorname{AppellF1}\left[3+m,1+\frac{m}{2},1+\frac{m}{2},4+m,\frac{a-i b}{a+b \operatorname{Tan}[e+f x]},\frac{a+i b}{a+b \operatorname{Tan}[e+f x]}\right] (d \operatorname{Cos}[e+f x])^m \operatorname{Sec}[e+f x]^2 (a \operatorname{Cos}[e+f x]+b \operatorname{Sin}[e+f x])^5\right) \Big/ \left(b f (3+m) \left((2+m) \left((a+i b) \operatorname{AppellF1}\left[4+m,1+\frac{m}{2},2+\frac{m}{2},5+m,\frac{a-i b}{a+b \operatorname{Tan}[e+f x]},\frac{a+i b}{a+b \operatorname{Tan}[e+f x]}\right]+(a-i b) \operatorname{AppellF1}\left[4+m,2+\frac{m}{2},1+\frac{m}{2},5+m,\frac{a-i b}{a+b \operatorname{Tan}[e+f x]},\frac{a+i b}{a+b \operatorname{Tan}[e+f x]}\right]\right) \operatorname{Cos}[e+f x]+2 (4+m) \operatorname{AppellF1}\left[3+m,1+\frac{m}{2},1+\frac{m}{2},4+m,\frac{a-i b}{a+b \operatorname{Tan}[e+f x]},\frac{a+i b}{a+b \operatorname{Tan}[e+f x]}\right] (a \operatorname{Cos}[e+f x]+b \operatorname{Sin}[e+f x])\right) (a+b \operatorname{Tan}[e+f x])^5\right)\right)$$

Problem 700: Result unnecessarily involves imaginary or complex numbers.

$$\int (d \operatorname{Cos}[e+f x])^m (a+b \operatorname{Tan}[e+f x])^n \, dx$$

Optimal (type 6, 187 leaves, 4 steps):

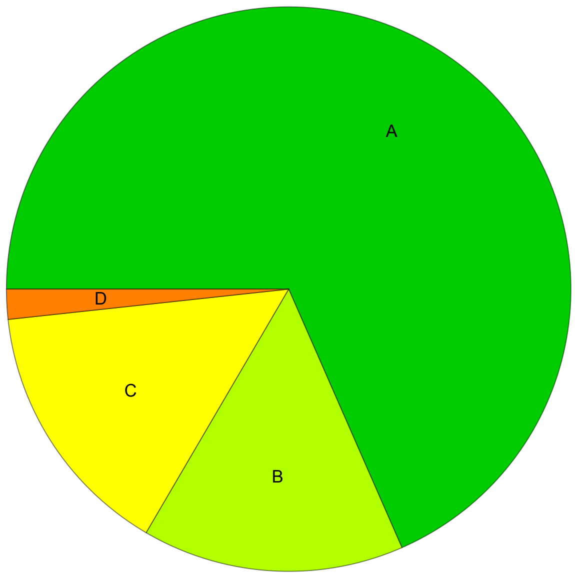
$$\frac{1}{b f (1+n)} \operatorname{AppellF1}\left[1+n,\frac{2+m}{2},\frac{2+m}{2},2+n,\frac{a+b \operatorname{Tan}[e+f x]}{a-\sqrt{-b^2}},\frac{a+b \operatorname{Tan}[e+f x]}{a+\sqrt{-b^2}}\right] \operatorname{Cos}[e+f x]^2 (d \operatorname{Cos}[e+f x])^m (a+b \operatorname{Tan}[e+f x])^{1+n} \left(1-\frac{a+b \operatorname{Tan}[e+f x]}{a-\sqrt{-b^2}}\right)^{\frac{2+m}{2}} \left(1-\frac{a+b \operatorname{Tan}[e+f x]}{a+\sqrt{-b^2}}\right)^{\frac{2+m}{2}}$$

Result (type 6, 365 leaves):

$$\left(2 (a - i b) (a + i b) (2 + n) \text{AppellF1}\left[1 + n, 1 + \frac{m}{2}, 1 + \frac{m}{2}, 2 + n, \frac{a + b \text{Tan}[e + f x]}{a - i b}, \frac{a + b \text{Tan}[e + f x]}{a + i b}\right] \text{Cos}[e + f x] (d \text{Cos}[e + f x])^m (a \text{Cos}[e + f x] + b \text{Sin}[e + f x]) (a + b \text{Tan}[e + f x])^n\right) \Big/ \left(b f (1 + n) \left(2 (a^2 + b^2) (2 + n) \text{AppellF1}\left[1 + n, 1 + \frac{m}{2}, 1 + \frac{m}{2}, 2 + n, \frac{a + b \text{Tan}[e + f x]}{a - i b}, \frac{a + b \text{Tan}[e + f x]}{a + i b}\right] + (2 + m) \left((a - i b) \text{AppellF1}\left[2 + n, 1 + \frac{m}{2}, 2 + \frac{m}{2}, 3 + n, \frac{a + b \text{Tan}[e + f x]}{a - i b}, \frac{a + b \text{Tan}[e + f x]}{a + i b}\right] + (a + i b) \text{AppellF1}\left[2 + n, 2 + \frac{m}{2}, 1 + \frac{m}{2}, 3 + n, \frac{a + b \text{Tan}[e + f x]}{a - i b}, \frac{a + b \text{Tan}[e + f x]}{a + i b}\right]\right) (a + b \text{Tan}[e + f x])\right)\right)$$

Summary of Integration Test Results

700 integration problems



A - 479 optimal antiderivatives

B - 105 more than twice size of optimal antiderivatives

C - 104 unnecessarily complex antiderivatives

D - 12 unable to integrate problems

E - 0 integration timeouts