Mathematica 11.3 Integration Test Results

Test results for the 208 problems in "4.1.1.3 (g tan)^p (a+b sin)^m.m"

Problem 1: Result more than twice size of optimal antiderivative.

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

Optimal (type 3, 115 leaves, 3 steps):

$$-\frac{23 a \operatorname{Log}[1 - \operatorname{Sin}[c + d x]]}{16 d} + \frac{7 a \operatorname{Log}[1 + \operatorname{Sin}[c + d x]]}{16 d} - \frac{a \operatorname{Sin}[c + d x]}{d} + \frac{a^3}{8 d (a - a \operatorname{Sin}[c + d x])^2} - \frac{a^2}{d (a - a \operatorname{Sin}[c + d x])} + \frac{a^2}{8 d (a + a \operatorname{Sin}[c + d x])}$$

Result (type 3, 246 leaves):

$$-\frac{a \operatorname{Log}[\operatorname{Cos}[c + d x]]}{d} - \frac{15 a \operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] - \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right]}{8 d} + \frac{15 a \operatorname{Log}\left[\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] + \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right]}{8 d} - \frac{a \operatorname{Sec}[c + d x]^2}{d} + \frac{a \operatorname{Sec}[c + d x]^4}{4 d} + \frac{a}{16 d \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] - \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^4} - \frac{9 a}{16 d \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] - \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^2} - \frac{a}{16 d \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] + \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^4} + \frac{9 a}{16 d \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] + \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^2} - \frac{a \operatorname{Sin}[c + d x]}{d}$$

Problem 2: Result more than twice size of optimal antiderivative.

$$\int (a + a \operatorname{Sin}[c + d x]) \operatorname{Tan}[c + d x]^3 \, dx$$

Optimal (type 3, 71 leaves, 3 steps):

$$\frac{5 a \operatorname{Log}[1 - \operatorname{Sin}[c + d x]]}{4 d} - \frac{a \operatorname{Log}[1 + \operatorname{Sin}[c + d x]]}{4 d} + \frac{a \operatorname{Sin}[c + d x]}{d} + \frac{a^2}{2 d (a - a \operatorname{Sin}[c + d x])}$$

Result (type 3, 166 leaves):

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

Problem 3: Result more than twice size of optimal antiderivative.

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

Optimal (type 3, 30 leaves, 3 steps):

$$-\frac{a\,\text{Log}[1-\text{Sin}[c+d\,x]]}{d}-\frac{a\,\text{Sin}[c+d\,x]}{d}$$

Result (type 3, 83 leaves):

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

Problem 21: Result more than twice size of optimal antiderivative.

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

Optimal (type 3, 71 leaves, 6 steps):

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

Result (type 3, 145 leaves):

$$-\left(\left(a^2\,(1+\text{Sin}[c+d\,x])^2\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]\,(10\,(c+d\,x)-8\,\text{Cos}[c+d\,x]-\text{Sin}[2\,(c+d\,x)])+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\,(-2\,(8+5\,c+5\,d\,x)+8\,\text{Cos}[c+d\,x]+\text{Sin}[2\,(c+d\,x)])\right)\right)\Big/\left(4\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4\right)\right)$$

Problem 25: Result more than twice size of optimal antiderivative.

$$\int (a + a \operatorname{Sin}[c + d x])^3 \operatorname{Tan}[c + d x]^7 \, dx$$

Optimal (type 3, 160 leaves, 3 steps):

$$\frac{209 a^3 \operatorname{Log}[1 - \operatorname{Sin}[c + d x]]}{16 d} - \frac{a^3 \operatorname{Log}[1 + \operatorname{Sin}[c + d x]]}{16 d} + \frac{7 a^3 \operatorname{Sin}[c + d x]}{d} + \frac{3 a^3 \operatorname{Sin}[c + d x]^2}{2 d} + \frac{a^3 \operatorname{Sin}[c + d x]^3}{3 d} + \frac{a^6}{6 d (a - a \operatorname{Sin}[c + d x])^3} - \frac{13 a^5}{8 d (a - a \operatorname{Sin}[c + d x])^2} + \frac{71 a^4}{8 d (a - a \operatorname{Sin}[c + d x])}$$

Result (type 3, 480 leaves):

$$-\frac{3 \operatorname{Cos}[2 (c + d x)] (a + a \operatorname{Sin}[c + d x])^3}{4 d \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] + \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^6} + \frac{209 \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 + a \operatorname{Sin}[c + d x])^3}{8 d \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] + \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^6} - \frac{\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 + a \operatorname{Sin}[c + d x])^3}{8 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 + a \operatorname{Sin}[c + d x])^3 \Big/ \left(6 d \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] - \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^6 \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] + \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^6\right) - \left(13 (a + a \operatorname{Sin}[c + d x])^3\right) \Big/ \left(8 d \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] - \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^4 \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] + \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^6\right) + \left(71 (a + a \operatorname{Sin}[c + d x])^3\right) \Big/ \left(8 d \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] - \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^2 \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] + \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^6\right) + \frac{29 \operatorname{Sin}[c + d x] (a + a \operatorname{Sin}[c + d x])^3}{4 d \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] + \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^6} - \frac{(a + a \operatorname{Sin}[c + d x])^3 \operatorname{Sin}[3 (c + d x)]}{12 d \left(\operatorname{Cos}\left[\frac{1}{2} (c + d x)\right] + \operatorname{Sin}\left[\frac{1}{2} (c + d x)\right]\right)^6}$$

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

$$\int (a + a \operatorname{Sin}[c + d x])^3 \operatorname{Tan}[c + d x]^6 \, dx$$

Optimal (type 3, 180 leaves, 9 steps):

$$-\frac{23 a^3 x}{2} + \frac{136 a^3 \operatorname{Cos}[c + d x]}{5 d} - \frac{136 a^3 \operatorname{Cos}[c + d x]^3}{15 d} + \frac{23 a^3 \operatorname{Cos}[c + d x] \operatorname{Sin}[c + d x]}{2 d} + \frac{a^6 \operatorname{Cos}[c + d x] \operatorname{Sin}[c + d x]^5}{5 d (a - a \operatorname{Sin}[c + d x])^3} - \frac{13 a^5 \operatorname{Cos}[c + d x] \operatorname{Sin}[c + d x]^4}{15 d (a - a \operatorname{Sin}[c + d x])^2} + \frac{23 a^6 \operatorname{Cos}[c + d x] \operatorname{Sin}[c + d x]^3}{3 d (a^3 - a^3 \operatorname{Sin}[c + d x])}$$

Result (type 3, 561 leaves):

$$-\frac{23\,(c+d\,x)\,(a+a\,\mathrm{Sin}[c+d\,x])^3}{2\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^6}+\frac{27\,\mathrm{Cos}[c+d\,x]\,(a+a\,\mathrm{Sin}[c+d\,x])^3}{4\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^6}-$$

$$\frac{\mathrm{Cos}[3\,(c+d\,x)]\,(a+a\,\mathrm{Sin}[c+d\,x])^3}{12\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^6}+(a+a\,\mathrm{Sin}[c+d\,x])^3\Big/$$

$$\left(5\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^6\right)-$$

$$\left(28\,(a+a\,\mathrm{Sin}[c+d\,x])^3\right)\Big/$$

$$\left(15\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^6\right)+$$

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

$$\left(5\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^5\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^6\right)-$$

$$\left(56\,\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\,(a+a\,\mathrm{Sin}[c+d\,x])^3\right)\Big/$$

$$\left(15\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^3\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^6\right)+$$

$$\left(394\,\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\,(a+a\,\mathrm{Sin}[c+d\,x])^3\right)\Big/$$

$$\left(15\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^6\right)+$$

$$\frac{3\,(a+a\,\mathrm{Sin}[c+d\,x])^3\,\mathrm{Sin}[2\,(c+d\,x)]}{4\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^6}$$

Problem 34: Result more than twice size of optimal antiderivative.

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

Optimal (type 3, 129 leaves, 3 steps):

$$-\frac{25\,a^4\,\mathrm{Log}[1-\mathrm{Sin}[c+d\,x]]}{d}-\frac{16\,a^4\,\mathrm{Sin}[c+d\,x]}{d}-\frac{9\,a^4\,\mathrm{Sin}[c+d\,x]^2}{2\,d}-$$

$$\frac{4\,a^4\,\mathrm{Sin}[c+d\,x]^3}{3\,d}-\frac{a^4\,\mathrm{Sin}[c+d\,x]^4}{4\,d}+\frac{a^6}{d\,(a-a\,\mathrm{Sin}[c+d\,x])^2}-\frac{11\,a^5}{d\,(a-a\,\mathrm{Sin}[c+d\,x])}$$

Result (type 3, 390 leaves):

$$\frac{19\,\text{Cos}[2\,(c+d\,x)]\,(a+a\,\text{Sin}[c+d\,x])^4}{8\,d\,\left(\text{Cos}[\frac{1}{2}\,(c+d\,x)]+\text{Sin}[\frac{1}{2}\,(c+d\,x)]\right)^8}-\frac{\text{Cos}[4\,(c+d\,x)]\,(a+a\,\text{Sin}[c+d\,x])^4}{32\,d\,\left(\text{Cos}[\frac{1}{2}\,(c+d\,x)]+\text{Sin}[\frac{1}{2}\,(c+d\,x)]\right)^8}-$$
$$\frac{50\,\text{Log}[\text{Cos}[\frac{1}{2}\,(c+d\,x)]-\text{Sin}[\frac{1}{2}\,(c+d\,x)]]\,(a+a\,\text{Sin}[c+d\,x])^4}{d\,\left(\text{Cos}[\frac{1}{2}\,(c+d\,x)]+\text{Sin}[\frac{1}{2}\,(c+d\,x)]\right)^8}+(a+a\,\text{Sin}[c+d\,x])^4\Big/$$
$$\left(d\,\left(\text{Cos}[\frac{1}{2}\,(c+d\,x)]-\text{Sin}[\frac{1}{2}\,(c+d\,x)]\right)^4\left(\text{Cos}[\frac{1}{2}\,(c+d\,x)]+\text{Sin}[\frac{1}{2}\,(c+d\,x)]\right)^8\right)-$$
$$\left(11\,(a+a\,\text{Sin}[c+d\,x])^4\right)\Big/$$
$$\left(d\,\left(\text{Cos}[\frac{1}{2}\,(c+d\,x)]-\text{Sin}[\frac{1}{2}\,(c+d\,x)]\right)^2\left(\text{Cos}[\frac{1}{2}\,(c+d\,x)]+\text{Sin}[\frac{1}{2}\,(c+d\,x)]\right)^8\right)-$$
$$\frac{17\,\text{Sin}[c+d\,x]\,(a+a\,\text{Sin}[c+d\,x])^4}{d\,\left(\text{Cos}[\frac{1}{2}\,(c+d\,x)]+\text{Sin}[\frac{1}{2}\,(c+d\,x)]\right)^8}+\frac{(a+a\,\text{Sin}[c+d\,x])^4\,\text{Sin}[3\,(c+d\,x)]}{3\,d\,\left(\text{Cos}[\frac{1}{2}\,(c+d\,x)]+\text{Sin}[\frac{1}{2}\,(c+d\,x)]\right)^8}$$

Problem 42: Result more than twice size of optimal antiderivative.

$$\int \text{Cot}[c+d\,x]^4\,(a+a\,\text{Sin}[c+d\,x])^4\,dx$$

Optimal (type 3, 140 leaves, 17 steps):

$$-\frac{61\,a^4\,x}{8}+\frac{2\,a^4\,\text{ArcTanh}[\text{Cos}[c+d\,x]]}{d}+\frac{4\,a^4\,\text{Cos}[c+d\,x]^3}{3\,d}-\frac{5\,a^4\,\text{Cot}[c+d\,x]}{d}-\frac{a^4\,\text{Cot}[c+d\,x]^3}{3\,d}-$$
$$\frac{2\,a^4\,\text{Cot}[c+d\,x]\,\text{Csc}[c+d\,x]}{d}-\frac{19\,a^4\,\text{Cos}[c+d\,x]\,\text{Sin}[c+d\,x]}{8\,d}-\frac{a^4\,\text{Cos}[c+d\,x]\,\text{Sin}[c+d\,x]^3}{4\,d}$$

Result (type 3, 685 leaves):

$$-\frac{61\,(c+d\,x)\,(a+a\,\mathrm{Sin}[c+d\,x])^4}{8\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}+$$

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

$$\frac{7\,\mathrm{Cot}\left[\frac{1}{2}\,(c+d\,x)\right]\,(a+a\,\mathrm{Sin}[c+d\,x])^4}{3\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}-\frac{\mathrm{Csc}\left[\frac{1}{2}\,(c+d\,x)\right]^2\,(a+a\,\mathrm{Sin}[c+d\,x])^4}{2\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}-$$

$$\frac{\mathrm{Cot}\left[\frac{1}{2}\,(c+d\,x)\right]\,\mathrm{Csc}\left[\frac{1}{2}\,(c+d\,x)\right]^2\,(a+a\,\mathrm{Sin}[c+d\,x])^4}{24\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}+$$

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

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

$$\frac{(a+a\,\mathrm{Sin}[c+d\,x])^4\,\mathrm{Sin}[4\,(c+d\,x)]}{32\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}+\frac{7\,(a+a\,\mathrm{Sin}[c+d\,x])^4\,\mathrm{Tan}\left[\frac{1}{2}\,(c+d\,x)\right]}{3\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}+$$

$$\frac{\mathrm{Sec}\left[\frac{1}{2}\,(c+d\,x)\right]^2\,(a+a\,\mathrm{Sin}[c+d\,x])^4\,\mathrm{Tan}\left[\frac{1}{2}\,(c+d\,x)\right]}{24\,d\,\left(\mathrm{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}$$

Problem 44: Result more than twice size of optimal antiderivative.

$$\int\frac{\mathrm{Tan}[c+d\,x]^7}{a+a\,\mathrm{Sin}[c+d\,x]}\,dx$$

Optimal (type 3, 130 leaves, 8 steps):

$$-\frac{35\,\mathrm{ArcTanh}[\mathrm{Sin}[c+d\,x]]}{128\,a\,d}+\frac{35\,\mathrm{Sec}[c+d\,x]\,\mathrm{Tan}[c+d\,x]}{128\,a\,d}-\frac{35\,\mathrm{Sec}[c+d\,x]\,\mathrm{Tan}[c+d\,x]^3}{192\,a\,d}+$$

$$\frac{7\,\mathrm{Sec}[c+d\,x]\,\mathrm{Tan}[c+d\,x]^5}{48\,a\,d}-\frac{\mathrm{Sec}[c+d\,x]\,\mathrm{Tan}[c+d\,x]^7}{8\,a\,d}+\frac{\mathrm{Tan}[c+d\,x]^8}{8\,a\,d}$$

Result (type 3, 342 leaves):

$$\frac{1}{384\,d\,\left(a+a\,\text{Sin}[c+d\,x]\right)}\left(-192+\frac{6}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^6}-\frac{40}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4}+\frac{114}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}+105\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2-105\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2+\frac{4\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^6}-\frac{27\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4}+\frac{87\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}\right)$$

Problem 45: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Tan}[c+d\,x]^5}{a+a\,\text{Sin}[c+d\,x]}\,dx$$

Optimal (type 3, 106 leaves, 7 steps):

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

Result (type 3, 267 leaves):

$$\frac{1}{96\,d\,\left(a+a\,\text{Sin}[c+d\,x]\right)}\left(48+\frac{4}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4}-\frac{21}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}-30\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2+30\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2+\frac{3\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4}-\frac{18\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}{\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}\right)$$

Problem 46: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Tan}[c+d x]^3}{a+a \,\text{Sin}[c+d x]} \, dx$$

Optimal (type 3, 82 leaves, 6 steps):

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

Result (type 3, 189 leaves):

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

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

$$\int \frac{\text{Tan}[c+d x]}{a+a \,\text{Sin}[c+d x]} \, dx$$

Optimal (type 3, 37 leaves, 5 steps):

$$\frac{\text{ArcTanh}[\text{Sin}[c+d x]]}{2 a d}+\frac{1}{2 d (a+a \,\text{Sin}[c+d x])}$$

Result (type 3, 126 leaves):

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

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

$$\int \frac{\text{Tan}[c+d x]^2}{a+a \,\text{Sin}[c+d x]} \, dx$$

Optimal (type 3, 50 leaves, 5 steps):

$$\frac{\text{Sec}[c+d x]}{a d}-\frac{\text{Sec}[c+d x]^3}{3 a d}+\frac{\text{Tan}[c+d x]^3}{3 a d}$$

Result (type 3, 106 leaves):

$$\left(6-10\,\text{Cos}[c+d x]+2\,\text{Cos}\left[2\,(c+d x)\right]+8\,\text{Sin}[c+d x]-5\,\text{Sin}\left[2\,(c+d x)\right]\right)\Big/\left(12\,a\,d\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]-\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)\left(1+\text{Sin}[c+d x]\right)\right)$$

Problem 56: Result more than twice size of optimal antiderivative.

$$\int \frac{1}{a+a\,\text{Sin}[c+d x]}\,dx$$

Optimal (type 3, 23 leaves, 1 step):

$$-\frac{\text{Cos}[c+d x]}{d\,(a+a\,\text{Sin}[c+d x])}$$

Result (type 3, 48 leaves):

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

Problem 57: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Cot}[c+d x]^2}{a+a\,\text{Sin}[c+d x]}\,dx$$

Optimal (type 3, 29 leaves, 4 steps):

$$\frac{\text{ArcTanh}[\text{Cos}[c+d x]]}{a d}-\frac{\text{Cot}[c+d x]}{a d}$$

Result (type 3, 69 leaves):

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

Problem 58: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Cot}[c+d x]^4}{a+a\,\text{Sin}[c+d x]}\,dx$$

Optimal (type 3, 58 leaves, 5 steps):

$$-\frac{\text{ArcTanh}[\text{Cos}[c+d x]]}{2 a d}-\frac{\text{Cot}[c+d x]^3}{3 a d}+\frac{\text{Cot}[c+d x] \text{Csc}[c+d x]}{2 a d}$$

Result (type 3, 124 leaves):

$$-\left(\left(\text{Csc}\left[\frac{1}{2}(c+d x)\right] \text{Sec}\left[\frac{1}{2}(c+d x)\right]\left(\text{Csc}\left[\frac{1}{2}(c+d x)\right]+\text{Sec}\left[\frac{1}{2}(c+d x)\right]\right)^2 \left(\text{Cos}[3(c+d x)]+\text{Cos}[c+d x](3-6 \text{Sin}[c+d x])+6\left(\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]\right]-\text{Log}\left[\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]\right) \text{Sin}[c+d x]^3\right)\right) \Big/ (96 a d(1+\text{Sin}[c+d x]))\right)$$

Problem 59: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Cot}[c+d x]^6}{a+a \text{Sin}[c+d x]} \, dx$$

Optimal (type 3, 82 leaves, 6 steps):

$$\frac{3 \text{ArcTanh}[\text{Cos}[c+d x]]}{8 a d}-\frac{\text{Cot}[c+d x]^5}{5 a d}-\frac{3 \text{Cot}[c+d x] \text{Csc}[c+d x]}{8 a d}+\frac{\text{Cot}[c+d x]^3 \text{Csc}[c+d x]}{4 a d}$$

Result (type 3, 189 leaves):

$$-\frac{1}{640 a d} \text{Csc}[c+d x]^5 \left(80 \text{Cos}[c+d x]+40 \text{Cos}[3(c+d x)]+8 \text{Cos}[5(c+d x)]-150 \text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]\right] \text{Sin}[c+d x]+150 \text{Log}\left[\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right] \text{Sin}[c+d x]+20 \text{Sin}[2(c+d x)]+75 \text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]\right] \text{Sin}[3(c+d x)]-75 \text{Log}\left[\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right] \text{Sin}[3(c+d x)]-50 \text{Sin}[4(c+d x)]-15 \text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]\right] \text{Sin}[5(c+d x)]+15 \text{Log}\left[\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right] \text{Sin}[5(c+d x)]\right)$$

Problem 60: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Cot}[c+d x]^8}{a+a \text{Sin}[c+d x]} \, dx$$

Optimal (type 3, 106 leaves, 7 steps):

$$-\frac{5 \text{ArcTanh}[\text{Cos}[c+d x]]}{16 a d}-\frac{\text{Cot}[c+d x]^7}{7 a d}+\frac{5 \text{Cot}[c+d x] \text{Csc}[c+d x]}{16 a d}-\frac{5 \text{Cot}[c+d x]^3 \text{Csc}[c+d x]}{24 a d}+\frac{\text{Cot}[c+d x]^5 \text{Csc}[c+d x]}{6 a d}$$

Result (type 3, 284 leaves):

$$-\frac{1}{86016\,a\,d\,(1+\mathrm{Sin}[c+d\,x])}\mathrm{Csc}[c+d\,x]^5\left(\mathrm{Csc}\left[\frac{1}{2}(c+d\,x)\right]+\mathrm{Sec}\left[\frac{1}{2}(c+d\,x)\right]\right)^2\Big(1680\,\mathrm{Cos}[c+d\,x]+1008\,\mathrm{Cos}[3\,(c+d\,x)]+336\,\mathrm{Cos}[5\,(c+d\,x)]+48\,\mathrm{Cos}[7\,(c+d\,x)]+3675\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]\right]\mathrm{Sin}[c+d\,x]-3675\,\mathrm{Log}\left[\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]\mathrm{Sin}[c+d\,x]-1190\,\mathrm{Sin}[2\,(c+d\,x)]-2205\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]\right]\mathrm{Sin}[3\,(c+d\,x)]+2205\,\mathrm{Log}\left[\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]\mathrm{Sin}[3\,(c+d\,x)]+392\,\mathrm{Sin}[4\,(c+d\,x)]+735\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]\right]\mathrm{Sin}[5\,(c+d\,x)]-735\,\mathrm{Log}\left[\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]\mathrm{Sin}[5\,(c+d\,x)]-462\,\mathrm{Sin}[6\,(c+d\,x)]-105\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]\right]\mathrm{Sin}[7\,(c+d\,x)]+105\,\mathrm{Log}\left[\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]\mathrm{Sin}[7\,(c+d\,x)]\Big)$$

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

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

Optimal (type 3, 104 leaves, 4 steps):

$$-\frac{\mathrm{ArcTanh}[\mathrm{Sin}[c+d\,x]]}{8\,a^2\,d}+\frac{a}{12\,d\,(a+a\,\mathrm{Sin}[c+d\,x])^3}-\frac{1}{4\,d\,(a+a\,\mathrm{Sin}[c+d\,x])^2}+\frac{1}{16\,d\,(a^2-a^2\,\mathrm{Sin}[c+d\,x])}+\frac{3}{16\,d\,(a^2+a^2\,\mathrm{Sin}[c+d\,x])}$$

Result (type 3, 217 leaves):

$$\left(-12+\frac{4}{\left(\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^2}+9\left(\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^2+6\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]\left(\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^4-6\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]\left(\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^4+\frac{3\left(\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^4}{\left(\mathrm{Cos}\left[\frac{1}{2}(c+d\,x)\right]-\mathrm{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^2}\right)\Big/\left(48\,d\,(a+a\,\mathrm{Sin}[c+d\,x])^2\right)$$

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

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

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

$$\frac{\text{ArcTanh}[\text{Sin}[c+d x]]}{4 a^2 d}+\frac{1}{4 d (a+a \text{Sin}[c+d x])^2}-\frac{1}{4 d \left(a^2+a^2 \text{Sin}[c+d x]\right)}$$

Result (type 3, 139 leaves):

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

Problem 65: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Cot}[c+d x]}{(a+a \text{Sin}[c+d x])^2} \, dx$$

Optimal (type 3, 52 leaves, 3 steps):

$$\frac{\text{Log}[\text{Sin}[c+d x]]}{a^2 d}-\frac{\text{Log}[1+\text{Sin}[c+d x]]}{a^2 d}+\frac{1}{d \left(a^2+a^2 \text{Sin}[c+d x]\right)}$$

Result (type 3, 112 leaves):

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

Problem 74: Result more than twice size of optimal antiderivative.

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

Optimal (type 3, 82 leaves, 4 steps):

$$\frac{\text{ArcTanh}[\text{Sin}[c+d x]]}{8 a^3 d}+\frac{1}{6 d (a+a \text{Sin}[c+d x])^3}-\frac{1}{8 a d (a+a \text{Sin}[c+d x])^2}-\frac{1}{8 d \left(a^3+a^3 \text{Sin}[c+d x]\right)}$$

Result (type 3, 167 leaves):

$$\left(4-3\left(\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^2-3\left(\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^4-3\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]-\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right]\left(\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^6+3\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right]\left(\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^6\right)\Big/\left(24\,d\,(a+a\,\mathrm{Sin}[c+d x])^3\right)$$

Problem 76: Result more than twice size of optimal antiderivative.

$$\int \frac{\mathrm{Cot}[c+d x]^3}{(a+a\,\mathrm{Sin}[c+d x])^3}\,dx$$

Optimal (type 3, 86 leaves, 3 steps):

$$\frac{3\,\mathrm{Csc}[c+d x]}{a^3 d}-\frac{\mathrm{Csc}[c+d x]^2}{2 a^3 d}+\frac{5\,\mathrm{Log}[\mathrm{Sin}[c+d x]]}{a^3 d}-\frac{5\,\mathrm{Log}[1+\mathrm{Sin}[c+d x]]}{a^3 d}+\frac{2}{d\left(a^3+a^3\,\mathrm{Sin}[c+d x]\right)}$$

Result (type 3, 226 leaves):

$$\frac{1}{8 a^3 d\,(1+\mathrm{Sin}[c+d x])^3}\left(\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^4\left(16-\left(1+\mathrm{Cot}\left[\frac{1}{2}(c+d x)\right]\right)^2+12\,\mathrm{Cot}\left[\frac{1}{2}(c+d x)\right]\left(\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^2-80\,\mathrm{Log}\left[\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right]\left(\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^2+40\,\mathrm{Log}[\mathrm{Sin}[c+d x]]\left(\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^2+12\left(\mathrm{Cos}\left[\frac{1}{2}(c+d x)\right]+\mathrm{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^2\mathrm{Tan}\left[\frac{1}{2}(c+d x)\right]-\left(1+\mathrm{Tan}\left[\frac{1}{2}(c+d x)\right]\right)^2\right)$$

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

$$\int \frac{\mathrm{Cot}[c+d x]^5}{(a+a\,\mathrm{Sin}[c+d x])^3}\,dx$$

Optimal (type 3, 96 leaves, 3 steps):

$$\frac{4\,\mathrm{Csc}[c+d x]}{a^3 d}-\frac{2\,\mathrm{Csc}[c+d x]^2}{a^3 d}+\frac{\mathrm{Csc}[c+d x]^3}{a^3 d}-\frac{\mathrm{Csc}[c+d x]^4}{4 a^3 d}+\frac{4\,\mathrm{Log}[\mathrm{Sin}[c+d x]]}{a^3 d}-\frac{4\,\mathrm{Log}[1+\mathrm{Sin}[c+d x]]}{a^3 d}$$

Result (type 3, 558 leaves):

$$\frac{9\,\text{Cot}\left[\frac{1}{2}(c+d\,x)\right]\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6}{4\,d\,(a+a\,\text{Sin}[c+d\,x])^3}-\frac{17\,\text{Csc}\left[\frac{1}{2}(c+d\,x)\right]^2\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6}{32\,d\,(a+a\,\text{Sin}[c+d\,x])^3}+$$
$$\left(\text{Cot}\left[\frac{1}{2}(c+d\,x)\right]\text{Csc}\left[\frac{1}{2}(c+d\,x)\right]^2\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6\right)\Big/$$
$$\left(8\,d\,(a+a\,\text{Sin}[c+d\,x])^3\right)-\frac{\text{Csc}\left[\frac{1}{2}(c+d\,x)\right]^4\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6}{64\,d\,(a+a\,\text{Sin}[c+d\,x])^3}-$$
$$\left(8\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right]\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6\right)\Big/$$
$$\left(d\,(a+a\,\text{Sin}[c+d\,x])^3\right)+\frac{4\,\text{Log}[\text{Sin}[c+d\,x]]\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6}{d\,(a+a\,\text{Sin}[c+d\,x])^3}-$$
$$\frac{17\,\text{Sec}\left[\frac{1}{2}(c+d\,x)\right]^2\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6}{32\,d\,(a+a\,\text{Sin}[c+d\,x])^3}-$$
$$\frac{\text{Sec}\left[\frac{1}{2}(c+d\,x)\right]^4\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6}{64\,d\,(a+a\,\text{Sin}[c+d\,x])^3}+$$
$$\frac{9\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6\text{Tan}\left[\frac{1}{2}(c+d\,x)\right]}{4\,d\,(a+a\,\text{Sin}[c+d\,x])^3}+$$
$$\left(\text{Sec}\left[\frac{1}{2}(c+d\,x)\right]^2\left(\text{Cos}\left[\frac{1}{2}(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}(c+d\,x)\right]\right)^6\text{Tan}\left[\frac{1}{2}(c+d\,x)\right]\right)\Big/$$
$$\left(8\,d\,(a+a\,\text{Sin}[c+d\,x])^3\right)$$

Problem 85: Result more than twice size of optimal antiderivative.

$$\int\frac{\text{Cot}[c+d\,x]^3}{(a+a\,\text{Sin}[c+d\,x])^4}\,dx$$

Optimal (type 3, 106 leaves, 3 steps):

$$\frac{4\,\text{Csc}[c+d\,x]}{a^4\,d}-\frac{\text{Csc}[c+d\,x]^2}{2\,a^4\,d}+\frac{9\,\text{Log}[\text{Sin}[c+d\,x]]}{a^4\,d}-\frac{9\,\text{Log}[1+\text{Sin}[c+d\,x]]}{a^4\,d}+\frac{1}{d\,(a^2+a^2\,\text{Sin}[c+d\,x])^2}+\frac{5}{d\,(a^4+a^4\,\text{Sin}[c+d\,x])}$$

Result (type 3, 275 leaves):

$$\frac{1}{8 a^4 d \left(1+\text{Sin}[c+d x]\right)^4}\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^4$$
$$\left(8-\left(1+\text{Cot}\left[\frac{1}{2}(c+d x)\right]\right)^4\text{Sin}\left[\frac{1}{2}(c+d x)\right]^2+40\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^2+\right.$$
$$16\,\text{Cot}\left[\frac{1}{2}(c+d x)\right]\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^4-$$
$$144\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^4+$$
$$72\,\text{Log}[\text{Sin}[c+d x]]\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^4+$$
$$16\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^4\text{Tan}\left[\frac{1}{2}(c+d x)\right]-$$
$$\left.\text{Cos}\left[\frac{1}{2}(c+d x)\right]^2\left(1+\text{Tan}\left[\frac{1}{2}(c+d x)\right]\right)^4\right)$$

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

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

Optimal (type 3, 108 leaves, 14 steps):

$$\frac{4\,\text{ArcTanh}[\text{Cos}[c+d x]]}{a^4 d}-\frac{\text{Cot}[c+d x]}{a^4 d}-\frac{2\,\text{Cot}[c+d x]}{5 a^4 d\left(1+\text{Csc}[c+d x]\right)^3}+$$
$$\frac{31\,\text{Cot}[c+d x]}{15 a^4 d\left(1+\text{Csc}[c+d x]\right)^2}-\frac{104\,\text{Cot}[c+d x]}{15 a^4 d\left(1+\text{Csc}[c+d x]\right)}$$

Result (type 3, 315 leaves):

$$\frac{1}{30 d\left(a+a\,\text{Sin}[c+d x]\right)^4}\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^3$$
$$\left(24\,\text{Sin}\left[\frac{1}{2}(c+d x)\right]-12\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)+76\,\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right.$$
$$\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^2-38\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^3+$$
$$316\,\text{Sin}\left[\frac{1}{2}(c+d x)\right]\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^4-$$
$$15\,\text{Cot}\left[\frac{1}{2}(c+d x)\right]\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^5+$$
$$120\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]\right]\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^5-$$
$$120\,\text{Log}\left[\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^5+$$
$$\left.15\left(\text{Cos}\left[\frac{1}{2}(c+d x)\right]+\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)^5\text{Tan}\left[\frac{1}{2}(c+d x)\right]\right)$$

Problem 89: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Cot}[c+d x]^4}{(a+a \text{Sin}[c+d x])^4} \, dx$$

Optimal (type 3, 120 leaves, 14 steps):

$$\frac{14 \text{ArcTanh}[\text{Cos}[c+d x]]}{a^4 d}-\frac{9 \text{Cot}[c+d x]}{a^4 d}-\frac{\text{Cot}[c+d x]^3}{3 a^4 d}+\frac{2 \text{Cot}[c+d x] \text{Csc}[c+d x]}{a^4 d}+\frac{4 \text{Cot}[c+d x]}{3 a^4 d (1+\text{Csc}[c+d x])^2}-\frac{44 \text{Cot}[c+d x]}{3 a^4 d (1+\text{Csc}[c+d x])}$$

Result (type 3, 589 leaves):

$$\frac{8 \text{Sin}[\frac{1}{2} (c+d x)] \left(\text{Cos}[\frac{1}{2} (c+d x)]+\text{Sin}[\frac{1}{2} (c+d x)]\right)^5}{3 d (a+a \text{Sin}[c+d x])^4}-\frac{4 \left(\text{Cos}[\frac{1}{2} (c+d x)]+\text{Sin}[\frac{1}{2} (c+d x)]\right)^6}{3 d (a+a \text{Sin}[c+d x])^4}+$$
$$\frac{80 \text{Sin}[\frac{1}{2} (c+d x)] \left(\text{Cos}[\frac{1}{2} (c+d x)]+\text{Sin}[\frac{1}{2} (c+d x)]\right)^7}{3 d (a+a \text{Sin}[c+d x])^4}-$$
$$\frac{13 \text{Cot}[\frac{1}{2} (c+d x)] \left(\text{Cos}[\frac{1}{2} (c+d x)]+\text{Sin}[\frac{1}{2} (c+d x)]\right)^8}{3 d (a+a \text{Sin}[c+d x])^4}+$$
$$\frac{\text{Csc}[\frac{1}{2} (c+d x)]^2 \left(\text{Cos}[\frac{1}{2} (c+d x)]+\text{Sin}[\frac{1}{2} (c+d x)]\right)^8}{2 d (a+a \text{Sin}[c+d x])^4}-$$
$$\left(\text{Cot}[\frac{1}{2} (c+d x)] \text{Csc}[\frac{1}{2} (c+d x)]^2 \left(\text{Cos}[\frac{1}{2} (c+d x)]+\text{Sin}[\frac{1}{2} (c+d x)]\right)^8\right) \Big/$$
$$\left(24 d (a+a \text{Sin}[c+d x])^4\right)+\frac{14 \text{Log}[\text{Cos}[\frac{1}{2} (c+d x)]] \left(\text{Cos}[\frac{1}{2} (c+d x)]+\text{Sin}[\frac{1}{2} (c+d x)]\right)^8}{d (a+a \text{Sin}[c+d x])^4}-$$
$$\frac{14 \text{Log}[\text{Sin}[\frac{1}{2} (c+d x)]] \left(\text{Cos}[\frac{1}{2} (c+d x)]+\text{Sin}[\frac{1}{2} (c+d x)]\right)^8}{d (a+a \text{Sin}[c+d x])^4}-$$
$$\frac{\text{Sec}[\frac{1}{2} (c+d x)]^2 \left(\text{Cos}[\frac{1}{2} (c+d x)]+\text{Sin}[\frac{1}{2} (c+d x)]\right)^8}{2 d (a+a \text{Sin}[c+d x])^4}+$$
$$\frac{13 \left(\text{Cos}[\frac{1}{2} (c+d x)]+\text{Sin}[\frac{1}{2} (c+d x)]\right)^8 \text{Tan}[\frac{1}{2} (c+d x)]}{3 d (a+a \text{Sin}[c+d x])^4}+$$
$$\left(\text{Sec}[\frac{1}{2} (c+d x)]^2 \left(\text{Cos}[\frac{1}{2} (c+d x)]+\text{Sin}[\frac{1}{2} (c+d x)]\right)^8 \text{Tan}[\frac{1}{2} (c+d x)]\right) \Big/$$
$$\left(24 d (a+a \text{Sin}[c+d x])^4\right)$$

Problem 90: Result more than twice size of optimal antiderivative.

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

Optimal (type 3, 133 leaves, 16 steps):

$$\frac{27 \text{ArcTanh}[\text{Cos}[c+d x]]}{2 a^4 d}-\frac{16 \text{Cot}[c+d x]}{a^4 d}-\frac{3 \text{Cot}[c+d x]^3}{a^4 d}-\frac{\text{Cot}[c+d x]^5}{5 a^4 d}+\frac{11 \text{Cot}[c+d x] \text{Csc}[c+d x]}{2 a^4 d}+\frac{\text{Cot}[c+d x] \text{Csc}[c+d x]^3}{a^4 d}-\frac{8 \text{Cot}[c+d x]}{a^4 d (1+\text{Csc}[c+d x])}$$

Result (type 3, 733 leaves):

$$\frac{16\,\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^7}{d\,(a+a\,\text{Sin}[c+d\,x])^4}-$$
$$\frac{33\,\text{Cot}\left[\frac{1}{2}\,(c+d\,x)\right]\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}{5\,d\,(a+a\,\text{Sin}[c+d\,x])^4}+$$
$$\frac{11\,\text{Csc}\left[\frac{1}{2}\,(c+d\,x)\right]^2\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}{8\,d\,(a+a\,\text{Sin}[c+d\,x])^4}-$$
$$\left(53\,\text{Cot}\left[\frac{1}{2}\,(c+d\,x)\right]\,\text{Csc}\left[\frac{1}{2}\,(c+d\,x)\right]^2\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8\right)\Big/$$
$$\left(160\,d\,(a+a\,\text{Sin}[c+d\,x])^4\right)+\frac{\text{Csc}\left[\frac{1}{2}\,(c+d\,x)\right]^4\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}{16\,d\,(a+a\,\text{Sin}[c+d\,x])^4}-$$
$$\left(\text{Cot}\left[\frac{1}{2}\,(c+d\,x)\right]\,\text{Csc}\left[\frac{1}{2}\,(c+d\,x)\right]^4\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8\right)\Big/$$
$$\left(160\,d\,(a+a\,\text{Sin}[c+d\,x])^4\right)+\frac{27\,\text{Log}\left[\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]\right]\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}{2\,d\,(a+a\,\text{Sin}[c+d\,x])^4}-$$
$$\frac{27\,\text{Log}\left[\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right]\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}{2\,d\,(a+a\,\text{Sin}[c+d\,x])^4}-$$
$$\frac{11\,\text{Sec}\left[\frac{1}{2}\,(c+d\,x)\right]^2\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}{8\,d\,(a+a\,\text{Sin}[c+d\,x])^4}-$$
$$\frac{\text{Sec}\left[\frac{1}{2}\,(c+d\,x)\right]^4\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8}{16\,d\,(a+a\,\text{Sin}[c+d\,x])^4}+$$
$$\frac{33\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8\,\text{Tan}\left[\frac{1}{2}\,(c+d\,x)\right]}{5\,d\,(a+a\,\text{Sin}[c+d\,x])^4}+$$
$$\left(53\,\text{Sec}\left[\frac{1}{2}\,(c+d\,x)\right]^2\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8\,\text{Tan}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\Big/$$
$$\left(160\,d\,(a+a\,\text{Sin}[c+d\,x])^4\right)+$$
$$\left(\text{Sec}\left[\frac{1}{2}\,(c+d\,x)\right]^4\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^8\,\text{Tan}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\Big/$$
$$\left(160\,d\,(a+a\,\text{Sin}[c+d\,x])^4\right)$$

Problem 91: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\sqrt{a+a\,\text{Sin}[e+f\,x]}\,\,\text{Tan}[e+f\,x]^4\,dx$$

Optimal (type 3, 162 leaves, 15 steps):

$$\frac{11\sqrt{a}\,\text{ArcTanh}\left[\frac{\sqrt{a}\,\text{Cos}[e+f x]}{\sqrt{2}\,\sqrt{a+a\,\text{Sin}[e+f x]}}\right]}{8\sqrt{2}\,f}-\frac{27\,\text{Sec}[e+f x]\,\sqrt{a\,(1+\text{Sin}[e+f x])}}{8 f}-\frac{\text{Sec}[e+f x]^3\,\sqrt{a\,(1+\text{Sin}[e+f x])}}{12 f}+\frac{29\sqrt{a+a\,\text{Sin}[e+f x]}\,\text{Tan}[e+f x]}{12 f}+\frac{5\sqrt{a\,(1+\text{Sin}[e+f x])}\,\text{Tan}[e+f x]^3}{12 f}$$

Result (type 3, 394 leaves):

$$\frac{1}{24 f\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^3}\left(\frac{6\,\text{Sin}\left[\frac{f x}{2}\right]}{\text{Cos}\left[\frac{e}{2}\right]+\text{Sin}\left[\frac{e}{2}\right]}-\frac{3\left(\text{Cos}\left[\frac{e}{2}\right]-\text{Sin}\left[\frac{e}{2}\right]\right)\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)}{\text{Cos}\left[\frac{e}{2}\right]+\text{Sin}\left[\frac{e}{2}\right]}+(33+33\,i)\right.$$

$$(-1)^{3/4}\,\text{ArcTanh}\left[\left(\frac{1}{2}+\frac{i}{2}\right)(-1)^{3/4}\,\text{Sec}\left[\frac{f x}{4}\right]\left(\text{Cos}\left[\frac{1}{4}(2 e+f x)\right]-\text{Sin}\left[\frac{1}{4}(2 e+f x)\right]\right)\right]$$

$$\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2-$$

$$48\,\text{Cos}\left[\frac{f x}{2}\right]\left(\text{Cos}\left[\frac{e}{2}\right]-\text{Sin}\left[\frac{e}{2}\right]\right)\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2+$$

$$48\left(\text{Cos}\left[\frac{e}{2}\right]+\text{Sin}\left[\frac{e}{2}\right]\right)\text{Sin}\left[\frac{f x}{2}\right]\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2+$$

$$\frac{4\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2}{\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]-\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^3}-$$

$$\left.\frac{36\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2}{\text{Cos}\left[\frac{1}{2}(e+f x)\right]-\text{Sin}\left[\frac{1}{2}(e+f x)\right]}\right)\sqrt{a\,(1+\text{Sin}[e+f x])}$$

Problem 92: Result unnecessarily involves imaginary or complex numbers.

$$\int\sqrt{a+a\,\text{Sin}[e+f x]}\,\text{Tan}[e+f x]^2\,dx$$

Optimal (type 3, 101 leaves, 4 steps):

$$-\frac{\sqrt{a}\,\text{ArcTanh}\left[\frac{\sqrt{a}\,\text{Cos}[e+f x]}{\sqrt{2}\,\sqrt{a+a\,\text{Sin}[e+f x]}}\right]}{\sqrt{2}\,f}+\frac{5\,\text{Sec}[e+f x]\,\sqrt{a+a\,\text{Sin}[e+f x]}}{f}-\frac{2\,\text{Sec}[e+f x]\,(a+a\,\text{Sin}[e+f x])^{3/2}}{a f}$$

Result (type 3, 114 leaves):

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

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

$$\int \mathrm{Cot}[e+f x]^2\,\sqrt{a+a\,\mathrm{Sin}[e+f x]}\,dx$$

Optimal (type 3, 89 leaves, 4 steps):

$$-\frac{\sqrt{a}\,\mathrm{ArcTanh}\left[\frac{\sqrt{a}\,\mathrm{Cos}[e+f x]}{\sqrt{a+a\,\mathrm{Sin}[e+f x]}}\right]}{f}+\frac{3\,a\,\mathrm{Cos}[e+f x]}{f\,\sqrt{a+a\,\mathrm{Sin}[e+f x]}}-\frac{\mathrm{Cot}[e+f x]\,\sqrt{a+a\,\mathrm{Sin}[e+f x]}}{f}$$

Result (type 3, 206 leaves):

$$\left(\mathrm{Csc}\left[\frac{1}{2}(e+f x)\right]^4\sqrt{a\,(1+\mathrm{Sin}[e+f x])}\left(-4\,\mathrm{Cos}\left[\frac{1}{2}(e+f x)\right]+2\,\mathrm{Cos}\left[\frac{3}{2}(e+f x)\right]+4\,\mathrm{Sin}\left[\frac{1}{2}(e+f x)\right]-\mathrm{Log}\left[1+\mathrm{Cos}\left[\frac{1}{2}(e+f x)\right]-\mathrm{Sin}\left[\frac{1}{2}(e+f x)\right]\right]\mathrm{Sin}[e+f x]+\mathrm{Log}\left[1-\mathrm{Cos}\left[\frac{1}{2}(e+f x)\right]+\mathrm{Sin}\left[\frac{1}{2}(e+f x)\right]\right]\mathrm{Sin}[e+f x]+2\,\mathrm{Sin}\left[\frac{3}{2}(e+f x)\right]\right)\right)\Big/\left(f\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\left(\mathrm{Csc}\left[\frac{1}{4}(e+f x)\right]-\mathrm{Sec}\left[\frac{1}{4}(e+f x)\right]\right)\left(\mathrm{Csc}\left[\frac{1}{4}(e+f x)\right]+\mathrm{Sec}\left[\frac{1}{4}(e+f x)\right]\right)\right)$$

Problem 95: Result unnecessarily involves imaginary or complex numbers.

$$\int (a+a\,\mathrm{Sin}[e+f x])^{3/2}\,\mathrm{Tan}[e+f x]^4\,dx$$

Optimal (type 3, 167 leaves, 14 steps):

$$-\frac{a^{3/2}\,\mathrm{ArcTanh}\left[\frac{\sqrt{a}\,\mathrm{Cos}[e+f x]}{\sqrt{2}\,\sqrt{a+a\,\mathrm{Sin}[e+f x]}}\right]}{2\sqrt{2}\,f}+\frac{2\,a^3\,\mathrm{Cos}[e+f x]^3}{3\,f\,(a+a\,\mathrm{Sin}[e+f x])^{3/2}}-\frac{4\,a^2\,\mathrm{Cos}[e+f x]}{f\,\sqrt{a+a\,\mathrm{Sin}[e+f x]}}-\frac{7\,a\,\mathrm{Sec}[e+f x]\,\sqrt{a+a\,\mathrm{Sin}[e+f x]}}{2\,f}+\frac{\mathrm{Sec}[e+f x]^3\,(a+a\,\mathrm{Sin}[e+f x])^{3/2}}{3\,f}$$

Result (type 3, 141 leaves):

$$\frac{1}{6 f} a \operatorname{Sec}[e+f x]^3 \left(\operatorname{Cos}\left[\frac{1}{2}(e+f x)\right]+\operatorname{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2 \sqrt{a(1+\operatorname{Sin}[e+f x])} \left(-45+6 \operatorname{Cos}[2(e+f x)]+(3+3 i)(-1)^{3/4} \operatorname{ArcTanh}\left[\left(\frac{1}{2}+\frac{i}{2}\right)(-1)^{3/4}\left(-1+\operatorname{Tan}\left[\frac{1}{4}(e+f x)\right]\right)\right] \left(\operatorname{Cos}\left[\frac{1}{2}(e+f x)\right]-\operatorname{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^3+54 \operatorname{Sin}[e+f x]+\operatorname{Sin}[3(e+f x)]\right)$$

Problem 103: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\operatorname{Tan}[e+f x]^4}{\sqrt{a+a \operatorname{Sin}[e+f x]}} \, dx$$

Optimal (type 3, 150 leaves, 17 steps):

$$-\frac{67 \operatorname{ArcTanh}\left[\frac{\sqrt{a} \operatorname{Cos}[e+f x]}{\sqrt{2} \sqrt{a+a \operatorname{Sin}[e+f x]}}\right]}{64 \sqrt{2} \sqrt{a} f}-\frac{\operatorname{Sec}[e+f x](53+127 \operatorname{Sin}[e+f x])}{192 f \sqrt{a+a \operatorname{Sin}[e+f x]}}+\frac{a \operatorname{Sin}[e+f x] \operatorname{Tan}[e+f x]}{24 f (a+a \operatorname{Sin}[e+f x])^{3/2}}+\frac{\operatorname{Tan}[e+f x]^3}{3 f \sqrt{a+a \operatorname{Sin}[e+f x]}}$$

Result (type 3, 118 leaves):

$$\left((804+804 i)(-1)^{3/4} \operatorname{ArcTanh}\left[\left(\frac{1}{2}+\frac{i}{2}\right)(-1)^{3/4}\left(-1+\operatorname{Tan}\left[\frac{1}{4}(e+f x)\right]\right)\right]\left(\operatorname{Cos}\left[\frac{1}{2}(e+f x)\right]+\operatorname{Sin}\left[\frac{1}{2}(e+f x)\right]\right)-\operatorname{Sec}[e+f x]^3(90+122 \operatorname{Cos}[2(e+f x)]-41 \operatorname{Sin}[e+f x]+183 \operatorname{Sin}[3(e+f x)])\right) \Big/ \left(768 f \sqrt{a(1+\operatorname{Sin}[e+f x])}\right)$$

Problem 104: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\operatorname{Tan}[e+f x]^2}{\sqrt{a+a \operatorname{Sin}[e+f x]}} \, dx$$

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

$$\frac{5 \operatorname{ArcTanh}\left[\frac{\sqrt{a} \operatorname{Cos}[e+f x]}{\sqrt{2} \sqrt{a+a \operatorname{Sin}[e+f x]}}\right]}{4 \sqrt{2} \sqrt{a} f}-\frac{\operatorname{Sec}[e+f x]}{2 f \sqrt{a+a \operatorname{Sin}[e+f x]}}+\frac{3 \operatorname{Sec}[e+f x] \sqrt{a+a \operatorname{Sin}[e+f x]}}{4 a f}$$

Result (type 3, 118 leaves):

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

Problem 105: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Cot}[e+f x]^2}{\sqrt{a+a\,\text{Sin}[e+f x]}}\,dx$$

Optimal (type 3, 62 leaves, 4 steps):

$$\frac{\text{ArcTanh}\left[\frac{\sqrt{a}\,\text{Cos}[e+f x]}{\sqrt{a+a\,\text{Sin}[e+f x]}}\right]}{\sqrt{a}\,f}-\frac{\text{Cot}[e+f x]}{f\sqrt{a+a\,\text{Sin}[e+f x]}}$$

Result (type 3, 138 leaves):

$$\left(\text{Csc}\left[\frac{1}{4}(e+f x)\right]\text{Sec}\left[\frac{1}{4}(e+f x)\right]\left(-2\,\text{Cos}\left[\frac{1}{2}(e+f x)\right]+2\,\text{Sin}\left[\frac{1}{2}(e+f x)\right]+\left(\text{Log}\left[1+\text{Cos}\left[\frac{1}{2}(e+f x)\right]-\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right]-\text{Log}\left[1-\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right]\right)\text{Sin}[e+f x]\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(8 f\sqrt{a(1+\text{Sin}[e+f x])}\right)$$

Problem 106: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Cot}[e+f x]^4}{\sqrt{a+a\,\text{Sin}[e+f x]}}\,dx$$

Optimal (type 3, 135 leaves, 11 steps):

$$-\frac{7\,\text{ArcTanh}\left[\frac{\sqrt{a}\,\text{Cos}[e+f x]}{\sqrt{a+a\,\text{Sin}[e+f x]}}\right]}{8\sqrt{a}\,f}+\frac{9\,\text{Cot}[e+f x]}{8 f\sqrt{a+a\,\text{Sin}[e+f x]}}+\frac{\text{Cot}[e+f x]\,\text{Csc}[e+f x]}{12 f\sqrt{a+a\,\text{Sin}[e+f x]}}-\frac{\text{Cot}[e+f x]\,\text{Csc}[e+f x]^2}{3 f\sqrt{a+a\,\text{Sin}[e+f x]}}$$

Result (type 3, 292 leaves):

$$\frac{1}{24 f \left(\text{Csc}\left[\frac{1}{4} (e+f x)\right]^2-\text{Sec}\left[\frac{1}{4} (e+f x)\right]^2\right)^3 \sqrt{a (1+\text{Sin}[e+f x])}} \text{Csc}\left[\frac{1}{2} (e+f x)\right]^9 \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right) \left(36 \text{Cos}\left[\frac{1}{2} (e+f x)\right]-46 \text{Cos}\left[\frac{3}{2} (e+f x)\right]-54 \text{Cos}\left[\frac{5}{2} (e+f x)\right]- 36 \text{Sin}\left[\frac{1}{2} (e+f x)\right]-63 \text{Log}\left[1+\text{Cos}\left[\frac{1}{2} (e+f x)\right]-\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right] \text{Sin}[e+f x]+ 63 \text{Log}\left[1-\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right] \text{Sin}[e+f x]-46 \text{Sin}\left[\frac{3}{2} (e+f x)\right]+ 54 \text{Sin}\left[\frac{5}{2} (e+f x)\right]+21 \text{Log}\left[1+\text{Cos}\left[\frac{1}{2} (e+f x)\right]-\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right] \text{Sin}[3 (e+f x)]- 21 \text{Log}\left[1-\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right] \text{Sin}[3 (e+f x)]\right)$$

Problem 107: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Tan}[e+f x]^4}{(a+a \text{Sin}[e+f x])^{3/2}} \, dx$$

Optimal (type 3, 177 leaves, 20 steps):

$$\frac{7 \text{ArcTanh}\left[\frac{\sqrt{a} \text{Cos}[e+f x]}{\sqrt{2} \sqrt{a+a \text{Sin}[e+f x]}}\right]}{256 \sqrt{2} a^{3/2} f}+\frac{7 \text{Cos}[e+f x]}{256 f (a+a \text{Sin}[e+f x])^{3/2}}- \frac{\text{Sec}[e+f x] (65+87 \text{Sin}[e+f x])}{192 f (a+a \text{Sin}[e+f x])^{3/2}}+\frac{a \text{Sin}[e+f x] \text{Tan}[e+f x]}{12 f (a+a \text{Sin}[e+f x])^{5/2}}+\frac{\text{Tan}[e+f x]^3}{3 f (a+a \text{Sin}[e+f x])^{3/2}}$$

Result (type 3, 334 leaves):

$$\frac{1}{768 f (a (1+\text{Sin}[e+f x]))^{3/2}} \left(124+\frac{64 \text{Sin}\left[\frac{1}{2} (e+f x)\right]}{\left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^3}- \frac{32}{\left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^2}-\frac{248 \text{Sin}\left[\frac{1}{2} (e+f x)\right]}{\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]}+ 342 \text{Sin}\left[\frac{1}{2} (e+f x)\right] \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)- 171 \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^2-(21+21 i) (-1)^{3/4} \text{ArcTanh}\left[\left(\frac{1}{2}+\frac{i}{2}\right) (-1)^{3/4} \left(-1+\text{Tan}\left[\frac{1}{4} (e+f x)\right]\right)\right] \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^3+ \frac{32 \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^3}{\left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]-\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^3}-\frac{192 \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^3}{\text{Cos}\left[\frac{1}{2} (e+f x)\right]-\text{Sin}\left[\frac{1}{2} (e+f x)\right]}\right)$$

Problem 108: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Tan}[e+f x]^2}{(a+a \,\text{Sin}[e+f x])^{3/2}} \, dx$$

Optimal (type 3, 134 leaves, 5 steps):

$$\frac{\text{ArcTanh}\left[\frac{\sqrt{a}\,\text{Cos}[e+f x]}{\sqrt{2}\,\sqrt{a+a \,\text{Sin}[e+f x]}}\right]}{32 \sqrt{2}\, a^{3/2} f}+\frac{\text{Cos}[e+f x]}{32 f\,(a+a \,\text{Sin}[e+f x])^{3/2}}-\frac{\text{Sec}[e+f x]}{4 f\,(a+a \,\text{Sin}[e+f x])^{3/2}}+\frac{5 \,\text{Sec}[e+f x]}{8 a f \sqrt{a+a \,\text{Sin}[e+f x]}}$$

Result (type 3, 128 leaves):

$$-\left(\left(\text{Sec}[e+f x]\left(-25-\text{Cos}[2 (e+f x)]+(2+2 i)\,(-1)^{3/4}\,\text{ArcTanh}\left[\left(\frac{1}{2}+\frac{i}{2}\right)(-1)^{3/4}\left(-1+\text{Tan}\left[\frac{1}{4}(e+f x)\right]\right)\right]\right.\right.\right.$$
$$\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]-\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^4-$$
$$\left.\left.40 \,\text{Sin}[e+f x]\right)\right)\Big/\left(64 f\,(a\,(1+\text{Sin}[e+f x]))^{3/2}\right)\Big)$$

Problem 109: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Cot}[e+f x]^2}{(a+a \,\text{Sin}[e+f x])^{3/2}} \, dx$$

Optimal (type 3, 113 leaves, 6 steps):

$$\frac{3 \,\text{ArcTanh}\left[\frac{\sqrt{a}\,\text{Cos}[e+f x]}{\sqrt{a+a \,\text{Sin}[e+f x]}}\right]}{a^{3/2} f}-\frac{2 \sqrt{2}\,\text{ArcTanh}\left[\frac{\sqrt{a}\,\text{Cos}[e+f x]}{\sqrt{2}\,\sqrt{a+a \,\text{Sin}[e+f x]}}\right]}{a^{3/2} f}-\frac{\text{Cot}[e+f x]}{a f \sqrt{a+a \,\text{Sin}[e+f x]}}$$

Result (type 3, 206 leaves):

$$\frac{1}{4 f\,(a\,(1+\text{Sin}[e+f x]))^{3/2}}\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^3$$
$$\left((16+16 i)\,(-1)^{3/4}\,\text{ArcTanh}\left[\left(\frac{1}{2}+\frac{i}{2}\right)(-1)^{3/4}\left(-1+\text{Tan}\left[\frac{1}{4}(e+f x)\right]\right)\right]-\right.$$
$$\text{Cot}\left[\frac{1}{4}(e+f x)\right]+2\left(3 \,\text{Log}\left[1+\text{Cos}\left[\frac{1}{2}(e+f x)\right]-\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$
$$\left.3 \,\text{Log}\left[1-\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right]\right]+\text{Sec}\left[\frac{1}{2}(e+f x)\right]+$$
$$\left.\text{Csc}[e+f x]\,\text{Sin}\left[\frac{1}{4}(e+f x)\right]^2-\text{Csc}[e+f x]\,\text{Sin}\left[\frac{1}{4}(e+f x)\right]\text{Sin}\left[\frac{3}{4}(e+f x)\right]\right)\Big)$$

Problem 110: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Cot}[e+f x]^4}{(a+a \text{Sin}[e+f x])^{3/2}} \, dx$$

Optimal (type 3, 144 leaves, 10 steps):

$$-\frac{\text{ArcTanh}\left[\frac{\sqrt{a} \text{Cos}[e+f x]}{\sqrt{a+a \text{Sin}[e+f x]}}\right]}{8 a^{3/2} f}-\frac{\text{Cot}[e+f x]}{8 a f \sqrt{a+a \text{Sin}[e+f x]}}+\frac{11 \text{Cot}[e+f x] \text{Csc}[e+f x]}{12 a f \sqrt{a+a \text{Sin}[e+f x]}}-\frac{\text{Cot}[e+f x] \text{Csc}[e+f x]^2 \sqrt{a+a \text{Sin}[e+f x]}}{3 a^2 f}$$

Result (type 3, 294 leaves):

$$\frac{1}{24 f \left(\text{Csc}\left[\frac{1}{4} (e+f x)\right]^2-\text{Sec}\left[\frac{1}{4} (e+f x)\right]^2\right)^3 (a (1+\text{Sin}[e+f x]))^{3/2}} \text{Csc}\left[\frac{1}{2} (e+f x)\right]^9 \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^3 \left(-132 \text{Cos}\left[\frac{1}{2} (e+f x)\right]+62 \text{Cos}\left[\frac{3}{2} (e+f x)\right]+6 \text{Cos}\left[\frac{5}{2} (e+f x)\right]+132 \text{Sin}\left[\frac{1}{2} (e+f x)\right]-9 \text{Log}\left[1+\text{Cos}\left[\frac{1}{2} (e+f x)\right]-\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right] \text{Sin}[e+f x]+9 \text{Log}\left[1-\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right] \text{Sin}[e+f x]+62 \text{Sin}\left[\frac{3}{2} (e+f x)\right]-6 \text{Sin}\left[\frac{5}{2} (e+f x)\right]+3 \text{Log}\left[1+\text{Cos}\left[\frac{1}{2} (e+f x)\right]-\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right] \text{Sin}[3 (e+f x)]-3 \text{Log}\left[1-\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right] \text{Sin}[3 (e+f x)]\right)$$

Problem 111: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Tan}[e+f x]^4}{(a+a \text{Sin}[e+f x])^{5/2}} \, dx$$

Optimal (type 3, 207 leaves, 23 steps):

$$\frac{317 \text{ArcTanh}\left[\frac{\sqrt{a} \text{Cos}[e+f x]}{\sqrt{2} \sqrt{a+a \text{Sin}[e+f x]}}\right]}{4096 \sqrt{2} a^{5/2} f}+\frac{317 \text{Cos}[e+f x]}{3072 f (a+a \text{Sin}[e+f x])^{5/2}}-\frac{\text{Sec}[e+f x] (115+129 \text{Sin}[e+f x])}{384 f (a+a \text{Sin}[e+f x])^{5/2}}+\frac{317 \text{Cos}[e+f x]}{4096 a f (a+a \text{Sin}[e+f x])^{3/2}}+\frac{5 a \text{Sin}[e+f x] \text{Tan}[e+f x]}{48 f (a+a \text{Sin}[e+f x])^{7/2}}+\frac{\text{Tan}[e+f x]^3}{3 f (a+a \text{Sin}[e+f x])^{5/2}}$$

Result (type 3, 394 leaves):

$$\frac{1}{12288 f (a (1+\text{Sin}[e+f x]))^{5/2}}\left(1312+\frac{768 \text{Sin}\left[\frac{1}{2}(e+f x)\right]}{\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^3}-\frac{384}{\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2}-\right.$$

$$\frac{2624 \text{Sin}\left[\frac{1}{2}(e+f x)\right]}{\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]}+2584 \text{Sin}\left[\frac{1}{2}(e+f x)\right]$$

$$\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)-1292\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2+$$

$$402 \text{Sin}\left[\frac{1}{2}(e+f x)\right]\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^3-$$

$$201\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^4-(951+951 i)(-1)^{3/4}$$

$$\text{ArcTanh}\left[\left(\frac{1}{2}+\frac{i}{2}\right)(-1)^{3/4}\left(-1+\text{Tan}\left[\frac{1}{4}(e+f x)\right]\right)\right]\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^5+$$

$$\left.\frac{256\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^5}{\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]-\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^3}-\frac{1152\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^5}{\text{Cos}\left[\frac{1}{2}(e+f x)\right]-\text{Sin}\left[\frac{1}{2}(e+f x)\right]}\right)$$

Problem 112: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Tan}[e+f x]^2}{(a+a \text{Sin}[e+f x])^{5/2}} \, dx$$

Optimal (type 3, 167 leaves, 6 steps):

$$-\frac{11 \text{ArcTanh}\left[\frac{\sqrt{a} \text{Cos}[e+f x]}{\sqrt{2} \sqrt{a+a \text{Sin}[e+f x]}}\right]}{128 \sqrt{2} a^{5/2} f}-\frac{\text{Sec}[e+f x]}{6 f (a+a \text{Sin}[e+f x])^{5/2}}-$$

$$\frac{11 \text{Cos}[e+f x]}{128 a f (a+a \text{Sin}[e+f x])^{3/2}}+\frac{17 \text{Sec}[e+f x]}{48 a f (a+a \text{Sin}[e+f x])^{3/2}}+\frac{11 \text{Sec}[e+f x]}{96 a^2 f \sqrt{a+a \text{Sin}[e+f x]}}$$

Result (type 3, 284 leaves):

$$\frac{1}{384\,f\,\left(a\,\left(1+\text{Sin}[e+f\,x]\right)\right)^{5/2}}\left(-32+\frac{64\,\text{Sin}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}{\text{Cos}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}-\right.$$
$$104\,\text{Sin}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\,\left(\text{Cos}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)+$$
$$52\,\left(\text{Cos}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)^2-30\,\text{Sin}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]$$
$$\left(\text{Cos}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)^3+15\,\left(\text{Cos}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)^4+$$
$$\left(33+33\,i\right)\,\left(-1\right)^{3/4}\,\text{ArcTanh}\left[\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(-1\right)^{3/4}\,\left(-1+\text{Tan}\left[\frac{1}{4}\,\left(e+f\,x\right)\right]\right)\right]$$
$$\left.\left(\text{Cos}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)^5+\frac{48\,\left(\text{Cos}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]+\text{Sin}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)^5}{\text{Cos}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]-\text{Sin}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}\right)$$

Problem 113: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \frac{\text{Cot}[e+f\,x]^2}{\left(a+a\,\text{Sin}[e+f\,x]\right)^{5/2}}\,dx$$

Optimal (type 3, 141 leaves, 7 steps):

$$\frac{5\,\text{ArcTanh}\left[\frac{\sqrt{a}\,\text{Cos}[e+f\,x]}{\sqrt{a+a\,\text{Sin}[e+f\,x]}}\right]}{a^{5/2}\,f}-\frac{7\,\text{ArcTanh}\left[\frac{\sqrt{a}\,\text{Cos}[e+f\,x]}{\sqrt{2}\,\sqrt{a+a\,\text{Sin}[e+f\,x]}}\right]}{\sqrt{2}\,a^{5/2}\,f}-\frac{2\,\text{Cos}[e+f\,x]}{a\,f\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{3/2}}-\frac{\text{Cot}[e+f\,x]}{a\,f\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{3/2}}$$

Result (type 3, 451 leaves):

$$\frac{1}{4 f \left(a \left(1+\text{Sin}[e+f x]\right)\right)^{5/2}} \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^3$$
$$\left(8 \text{Sin}\left[\frac{1}{2} (e+f x)\right]-4 \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)+\right.$$
$$2 \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^2+(28+28 i) (-1)^{3/4}$$
$$\text{ArcTanh}\left[\left(\frac{1}{2}+\frac{i}{2}\right) (-1)^{3/4} \left(-1+\text{Tan}\left[\frac{1}{4} (e+f x)\right]\right)\right] \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^2-$$
$$\text{Cot}\left[\frac{1}{4} (e+f x)\right] \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^2+$$
$$10 \text{Log}\left[1+\text{Cos}\left[\frac{1}{2} (e+f x)\right]-\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right] \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^2-$$
$$10 \text{Log}\left[1-\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right] \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^2+$$
$$\frac{2 \text{Sin}\left[\frac{1}{4} (e+f x)\right] \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^2}{\text{Cos}\left[\frac{1}{4} (e+f x)\right]-\text{Sin}\left[\frac{1}{4} (e+f x)\right]}-$$
$$\frac{2 \text{Sin}\left[\frac{1}{4} (e+f x)\right] \left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^2}{\text{Cos}\left[\frac{1}{4} (e+f x)\right]+\text{Sin}\left[\frac{1}{4} (e+f x)\right]}-$$
$$\left.\left(\text{Cos}\left[\frac{1}{2} (e+f x)\right]+\text{Sin}\left[\frac{1}{2} (e+f x)\right]\right)^2 \text{Tan}\left[\frac{1}{4} (e+f x)\right]\right)$$

Problem 114: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Cot}[e+f x]^4}{(a+a \text{Sin}[e+f x])^{5/2}} \, dx$$

Optimal (type 3, 191 leaves, 16 steps):

$$\frac{45 \text{ArcTanh}\left[\frac{\sqrt{a} \text{Cos}[e+f x]}{\sqrt{a+a \text{Sin}[e+f x]}}\right]}{8 a^{5/2} f}-\frac{4 \sqrt{2} \text{ArcTanh}\left[\frac{\sqrt{a} \text{Cos}[e+f x]}{\sqrt{2} \sqrt{a+a \text{Sin}[e+f x]}}\right]}{a^{5/2} f}-$$
$$\frac{19 \text{Cot}[e+f x]}{8 a^2 f \sqrt{a+a \text{Sin}[e+f x]}}+\frac{13 \text{Cot}[e+f x] \text{Csc}[e+f x]}{12 a^2 f \sqrt{a+a \text{Sin}[e+f x]}}-\frac{\text{Cot}[e+f x] \text{Csc}[e+f x]^2}{3 a^2 f \sqrt{a+a \text{Sin}[e+f x]}}$$

Result (type 3, 332 leaves):

$$\frac{1}{192\,f\,\left(a\,\left(1+\text{Sin}[e+f\,x]\right)\right)^{5/2}}\left(\text{Cos}\left[\frac{1}{2}\,(e+f\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^5$$
$$\left((1536+1536\,i)\,(-1)^{3/4}\,\text{ArcTanh}\left[\left(\frac{1}{2}+\frac{i}{2}\right)\,(-1)^{3/4}\,\left(-1+\text{Tan}\left[\frac{1}{4}\,(e+f\,x)\right]\right)\right]-\right.$$
$$\frac{1}{\left(\text{Csc}\left[\frac{1}{4}\,(e+f\,x)\right]^2-\text{Sec}\left[\frac{1}{4}\,(e+f\,x)\right]^2\right)^3}$$
$$8\,\text{Csc}\left[\frac{1}{2}\,(e+f\,x)\right]^9\,\left(396\,\text{Cos}\left[\frac{1}{2}\,(e+f\,x)\right]-218\,\text{Cos}\left[\frac{3}{2}\,(e+f\,x)\right]-114\,\text{Cos}\left[\frac{5}{2}\,(e+f\,x)\right]-\right.$$
$$396\,\text{Sin}\left[\frac{1}{2}\,(e+f\,x)\right]-405\,\text{Log}\left[1+\text{Cos}\left[\frac{1}{2}\,(e+f\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Sin}[e+f\,x]+$$
$$405\,\text{Log}\left[1-\text{Cos}\left[\frac{1}{2}\,(e+f\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Sin}[e+f\,x]-218\,\text{Sin}\left[\frac{3}{2}\,(e+f\,x)\right]+$$
$$114\,\text{Sin}\left[\frac{5}{2}\,(e+f\,x)\right]+135\,\text{Log}\left[1+\text{Cos}\left[\frac{1}{2}\,(e+f\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Sin}[3\,(e+f\,x)]-$$
$$\left.\left.135\,\text{Log}\left[1-\text{Cos}\left[\frac{1}{2}\,(e+f\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Sin}[3\,(e+f\,x)]\right)\right)$$

Problem 115: Result unnecessarily involves higher level functions.

$$\int(a+a\,\text{Sin}[e+f\,x])^{1/3}\,\text{Tan}[e+f\,x]^4\,dx$$

Optimal (type 4, 982 leaves, 10 steps):

$$-\frac{361\,\text{Sec}[e+f\,x]\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}}{126\,f}+\frac{361\,\text{Sec}[e+f\,x]\,\left(1-\text{Sin}[e+f\,x]\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}}{63\,f}-$$

$$\frac{\text{Sec}[e+f\,x]\,\left(65\,a^2-142\,a^2\,\text{Sin}[e+f\,x]\right)}{42\,f\,\left(a-a\,\text{Sin}[e+f\,x]\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{2/3}}+$$

$$\frac{361\,\left(1+\sqrt{3}\right)\,\text{Sec}[e+f\,x]\,\left(1-\text{Sin}[e+f\,x]\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{2/3}}{63\,f\,\left(2^{1/3}\,a^{1/3}-\left(1+\sqrt{3}\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}\right)}-$$

$$\left(361\times 2^{1/3}\,\text{EllipticE}\left[\text{ArcCos}\left[\frac{2^{1/3}\,a^{1/3}-\left(1-\sqrt{3}\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}}{2^{1/3}\,a^{1/3}-\left(1+\sqrt{3}\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}}\right],\frac{1}{4}\left(2+\sqrt{3}\right)\right]\right.$$
$$\text{Sec}[e+f\,x]\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{2/3}\,\left(2^{1/3}\,a^{1/3}-\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}\right)$$
$$\left.\sqrt{\left(\left(2^{2/3}\,a^{2/3}+2^{1/3}\,a^{1/3}\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}+\left(a+a\,\text{Sin}[e+f\,x]\right)^{2/3}\right)\Big/\left(2^{1/3}\,a^{1/3}-\left(1+\sqrt{3}\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}\right)^2\right)}\right)\Big/$$
$$\left(21\times 3^{3/4}\,a^{2/3}\,f\,\sqrt{-\frac{\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}\,\left(2^{1/3}\,a^{1/3}-\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}\right)}{\left(2^{1/3}\,a^{1/3}-\left(1+\sqrt{3}\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}\right)^2}}\right)-$$

$$\left(361\,\left(1-\sqrt{3}\right)\,\text{EllipticF}\left[\text{ArcCos}\left[\frac{2^{1/3}\,a^{1/3}-\left(1-\sqrt{3}\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}}{2^{1/3}\,a^{1/3}-\left(1+\sqrt{3}\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}}\right],\frac{1}{4}\left(2+\sqrt{3}\right)\right]\right.$$
$$\text{Sec}[e+f\,x]\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{2/3}\,\left(2^{1/3}\,a^{1/3}-\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}\right)$$
$$\left.\sqrt{\left(\left(2^{2/3}\,a^{2/3}+2^{1/3}\,a^{1/3}\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}+\left(a+a\,\text{Sin}[e+f\,x]\right)^{2/3}\right)\Big/\left(2^{1/3}\,a^{1/3}-\left(1+\sqrt{3}\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}\right)^2\right)}\right)\Big/$$
$$\left(63\times 2^{2/3}\times 3^{1/4}\,a^{2/3}\,f\,\sqrt{-\frac{\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}\,\left(2^{1/3}\,a^{1/3}-\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}\right)}{\left(2^{1/3}\,a^{1/3}-\left(1+\sqrt{3}\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{1/3}\right)^2}}\right)+$$

$$\frac{3\,a^2\,\text{Sin}[e+f\,x]\,\text{Tan}[e+f\,x]}{2\,f\,\left(a-a\,\text{Sin}[e+f\,x]\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{2/3}}-$$
$$\frac{3\,a^2\,\text{Sin}[e+f\,x]^2\,\text{Tan}[e+f\,x]}{f\,\left(a-a\,\text{Sin}[e+f\,x]\right)\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{2/3}}$$

Result (type 5, 593 leaves) :

$$\frac{1}{f}\left(a\,(1+\text{Sin}[e+f\,x])\right)^{1/3}\left(\frac{361}{63}-\frac{86}{63}\,\text{Sec}[e+f\,x]\,(-1+2\,\text{Sin}[e+f\,x])+\frac{1}{21}\,\text{Sec}[e+f\,x]^3\,(-1+8\,\text{Sin}[e+f\,x])\right)+$$

$$\frac{1}{189\,f\left(\text{Cos}\left[\frac{1}{2}\,(e+f\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}\,722\,\sqrt{2}\,(1+\text{Sin}[e+f\,x])^{1/6}\,\left(a\,(1+\text{Sin}[e+f\,x])\right)^{1/3}$$

$$\left(-\left(\left(\mathbb{i}\,\text{Cos}\left[\frac{\pi}{4}+\frac{1}{2}\,(-e-f\,x)\right]^{1/3}\left(-\left(\left(3\,\mathbb{i}\left(e^{-\mathbb{i}\left(\frac{\pi}{4}+\frac{1}{2}(-e-f\,x)\right)}+e^{\mathbb{i}\left(\frac{\pi}{4}+\frac{1}{2}(-e-f\,x)\right)}\right)^{2/3}\text{Hypergeometric2F1}\left[\right.\right.\right.\right.\right.\right.$$

$$\left.\left.\left.-\frac{1}{3},\frac{1}{3},\frac{2}{3},-e^{2\,\mathbb{i}\left(\frac{\pi}{4}+\frac{1}{2}(-e-f\,x)\right)}\right]\right)\Big/\left(2^{2/3}\left(1+e^{2\,\mathbb{i}\left(\frac{\pi}{4}+\frac{1}{2}(-e-f\,x)\right)}\right)^{2/3}\right)\right)-$$

$$\left(3\,\mathbb{i}\,e^{\mathbb{i}\left(\frac{\pi}{4}+\frac{1}{2}(-e-f\,x)\right)}\left(1+e^{2\,\mathbb{i}\left(\frac{\pi}{4}+\frac{1}{2}(-e-f\,x)\right)}\right)^{1/3}\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\right.\right.$$

$$\left.\left.\left.\left.-e^{2\,\mathbb{i}\left(\frac{\pi}{4}+\frac{1}{2}(-e-f\,x)\right)}\right]\right)\Big/\left(2\times2^{2/3}\left(e^{-\mathbb{i}\left(\frac{\pi}{4}+\frac{1}{2}(-e-f\,x)\right)}+e^{\mathbb{i}\left(\frac{\pi}{4}+\frac{1}{2}(-e-f\,x)\right)}\right)^{1/3}\right)\right)\right)\Big/$$

$$\left.\left(2\left(1+\text{Cos}\left[2\left(\frac{\pi}{4}+\frac{1}{2}\,(-e-f\,x)\right)\right]\right)^{1/6}\right)\right)+\left(3\,\text{Cos}\left[\frac{\pi}{4}+\frac{1}{2}\,(-e-f\,x)\right]^2\right.$$

$$\text{Hypergeometric2F1}\left[\frac{1}{2},\frac{5}{6},\frac{11}{6},\text{Cos}\left[\frac{\pi}{4}+\frac{1}{2}\,(-e-f\,x)\right]^2\right]\text{Sin}\left[\frac{\pi}{4}+\frac{1}{2}\,(-e-f\,x)\right]\Big)\Big/$$

$$\left.\left(5\left(1+\text{Cos}\left[2\left(\frac{\pi}{4}+\frac{1}{2}\,(-e-f\,x)\right)\right]\right)^{1/6}\sqrt{\text{Sin}\left[\frac{\pi}{4}+\frac{1}{2}\,(-e-f\,x)\right]^2}\right)\right)$$

Problem 116: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int(a+a\,\text{Sin}[e+f\,x])^{1/3}\,\text{Tan}[e+f\,x]^2\,dx$$

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

$$-\left(\left(5\,a\,\text{Cos}[e+f\,x]\,\text{Hypergeometric2F1}\left[\frac{1}{2},\frac{7}{6},\frac{3}{2},\frac{1}{2}\,(1-\text{Sin}[e+f\,x])\right](1+\text{Sin}[e+f\,x])^{1/6}\right)\Big/\right.$$

$$\left.\left(3\times2^{1/6}\,f\,(a+a\,\text{Sin}[e+f\,x])^{2/3}\right)\right)+$$

$$\frac{7\,\text{Sec}[e+f\,x]\,(a+a\,\text{Sin}[e+f\,x])^{1/3}}{f}-\frac{3\,\text{Sec}[e+f\,x]\,(a+a\,\text{Sin}[e+f\,x])^{4/3}}{a\,f}$$

Result (type 5, 566 leaves):

$$\frac{\left(a\left(1+\operatorname{Sin}[e+fx]\right)\right)^{1/3}\left(-5+\operatorname{Sec}[e+fx]\left(-1+2\operatorname{Sin}[e+fx]\right)\right)}{f}-\frac{1}{3f\left(\operatorname{Cos}\left[\frac{1}{2}(e+fx)\right]+\operatorname{Sin}\left[\frac{1}{2}(e+fx)\right]\right)}10\sqrt{2}\left(1+\operatorname{Sin}[e+fx]\right)^{1/6}\left(a\left(1+\operatorname{Sin}[e+fx]\right)\right)^{1/3}$$

$$\left(-\left(\left(\left(i\operatorname{Cos}\left[\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right]\right)^{1/3}\left(-\left(\left(3i\left(e^{-i\left(\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right)}+e^{i\left(\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right)}\right)^{2/3}\operatorname{Hypergeometric2F1}\left[-\frac{1}{3},\frac{1}{3},\frac{2}{3},-e^{2i\left(\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right)}\right]\right)\Big/\left(2^{2/3}\left(1+e^{2i\left(\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right)}\right)^{2/3}\right)\right)-\right.\right.\right.$$

$$\left(3ie^{i\left(\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right)}\left(1+e^{2i\left(\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right)}\right)^{1/3}\operatorname{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},-e^{2i\left(\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right)}\right]\right)\Big/\left(2\times2^{2/3}\left(e^{-i\left(\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right)}+e^{i\left(\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right)}\right)^{1/3}\right)\Bigg)\Bigg)\Big/$$

$$\left(2\left(1+\operatorname{Cos}\left[2\left(\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right)\right]\right)^{1/6}\right)\Bigg)+\left(3\operatorname{Cos}\left[\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right]^2\right.$$

$$\operatorname{Hypergeometric2F1}\left[\frac{1}{2},\frac{5}{6},\frac{11}{6},\operatorname{Cos}\left[\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right]^2\right]\operatorname{Sin}\left[\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right]\Bigg)\Big/$$

$$\left(5\left(1+\operatorname{Cos}\left[2\left(\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right)\right]\right)^{1/6}\sqrt{\operatorname{Sin}\left[\frac{\pi}{4}+\frac{1}{2}(-e-fx)\right]^2}\right)\Bigg)$$

Problem 117: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\operatorname{Cot}[e+fx]^2\left(a+a\operatorname{Sin}[e+fx]\right)^{1/3}dx$$

Optimal (type 6, 80 leaves, 3 steps):

$$\frac{1}{11a^2f}6\sqrt{2}\operatorname{AppellF1}\left[\frac{11}{6},-\frac{1}{2},2,\frac{17}{6},\frac{1}{2}\left(1+\operatorname{Sin}[e+fx]\right),1+\operatorname{Sin}[e+fx]\right]\operatorname{Sec}[e+fx]\sqrt{1-\operatorname{Sin}[e+fx]}\left(a+a\operatorname{Sin}[e+fx]\right)^{7/3}$$

Result (type 6, 10 034 leaves):

$$\frac{\left(-4-\operatorname{Cot}[e+fx]\right)\left(a\left(1+\operatorname{Sin}[e+fx]\right)\right)^{1/3}}{f}+$$

$$\left(\left(60+60i\right)\operatorname{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\operatorname{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\operatorname{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\operatorname{Cos}\left[\frac{1}{2}(e+fx)\right]^2\operatorname{Sin}\left[\frac{1}{2}(e+fx)\right]\right.$$

$$\left(a\left(1+\operatorname{Sin}[e+fx]\right)\right)^{1/3}\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\left(\left(5+5i\right)\operatorname{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\operatorname{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\operatorname{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]+\right.$$

$$\operatorname{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\operatorname{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\operatorname{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.$$
$$\left.\left.\left.\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\Big/$$
$$\left(f\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)\left(-400\,i\right.\right.$$
$$\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]^2$$
$$\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]-\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)\text{Sin}\left[\frac{1}{2}(e+f x)\right]^3+8$$
$$\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+\right.$$
$$i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.$$
$$\left.\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\right)^2\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2+$$
$$5\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]$$
$$\left(-5\left(2\,\text{AppellF1}\left[\frac{8}{3},\frac{1}{3},\frac{7}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.\right.\right.$$
$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{8}{3},\frac{4}{3},\frac{4}{3},\frac{11}{3},\right.$$
$$\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]-2\,\text{AppellF1}\left[\frac{8}{3},\right.$$
$$\left.\left.\frac{7}{3},\frac{1}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\right)$$
$$\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2+(2+2\,i)\,\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\right.$$
$$\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]$$
$$\left(-2+\text{Cos}[e+f x]+\text{Cos}[2(e+f x)]-3\,\text{Sin}[e+f x]\right)-(2-2\,i)\,\text{AppellF1}\left[\frac{5}{3},\right.$$
$$\left.\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]$$
$$\left.\left.\left.\left(-2+\text{Cos}[e+f x]+\text{Cos}[2(e+f x)]-3\,\text{Sin}[e+f x]\right)\right)\right)\right)+$$
$$\left(\left(\frac{5}{2}+\frac{5\,i}{2}\right)\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),\right.\right.$$
$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right]$$
$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]\left(a\left(1+\text{Sin}[e+f x]\right)\right)^{1/3}$$

$$\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\sqrt{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}}\right)^{2/3}\Bigg) \Big/$$

$$\Bigg(f\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)$$

$$\Bigg(\Big((5+5 i)\,\text{AppellF1}\Big[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]+$$

$$\Big(\text{AppellF1}\Big[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]+$$

$$i\,\text{AppellF1}\Big[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\Big)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big)$$

$$\Bigg(\Bigg((15+15 i)\left(\left(\frac{1}{30}-\frac{i}{30}\right)\text{AppellF1}\Big[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),\right.$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+$$

$$\left(\frac{1}{30}+\frac{i}{30}\right)\text{AppellF1}\Big[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\sqrt{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}}\right)^{2/3}\Bigg) \Big/$$

$$\Big((5+5 i)\,\text{AppellF1}\Big[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]+\Big(\text{AppellF1}\Big[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]+i\,\text{AppellF1}\Big[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\Big(1+$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\Big)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big)-$$

$$\left((15+15\,i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right),\right.\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\right]\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]}{\sqrt{\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2}}\right)^{2/3}\left(\frac{1}{2}\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\right.\right.\right.$$

$$\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\Big]+i\,\text{AppellF1}\Big[\frac{5}{3},$$

$$\left.\left.\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\right]\right)$$

$$\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2+(5+5\,i)\left(\left(\frac{1}{30}-\frac{i}{30}\right)\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\right.\right.$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\right]\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2+$$

$$\left(\frac{1}{30}+\frac{i}{30}\right)\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right),\right.$$

$$\left.\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\right]\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2\right)+$$

$$\left(\left(\frac{5}{24}-\frac{5\,i}{24}\right)\text{AppellF1}\left[\frac{8}{3},\frac{1}{3},\frac{7}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right),\right.\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\right]\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2+\left(\frac{5}{96}+\frac{5\,i}{96}\right)\text{AppellF1}\Big[\frac{8}{3},$$

$$\left.\frac{4}{3},\frac{4}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2+i\left(\left(\frac{5}{96}-\frac{5\,i}{96}\right)\text{AppellF1}\left[\frac{8}{3},\frac{4}{3},\frac{4}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\right.\right.$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\right]\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2+$$

$$\left(\frac{5}{24}+\frac{5\,i}{24}\right)\text{AppellF1}\left[\frac{8}{3},\frac{7}{3},\frac{1}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\right.$$

$$\left.\left.\left.\left.\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\right]\text{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2\right)\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\right)\right)\right)\Bigg/$$

$$\left(\left((5+5\,i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\right.\right.\right.$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\right]+\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right),\right.\right.$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)\Big]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\right[\right.$$

$$\frac{1}{2}\left(e+f x\right)\Big]\Big),\ \left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right)\Big]\Big)\left(1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right)^2+$$

$$\Bigg((10+10\,i)\ \text{AppellF1}\Big[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right),$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right)\Big]$$

$$\left(\frac{1}{2}\sqrt{\text{Sec}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2}-\frac{\text{Tan}\big[\frac{1}{2}\left(e+f x\right)\big]\left(1+\text{Tan}\big[\frac{1}{2}\left(e+f x\right)\big]\right)}{2\sqrt{\text{Sec}\big[\frac{1}{2}\left(e+f x\right)\big]^2}}\right)\Bigg)\Bigg/$$

$$\left(\left(\frac{1+\text{Tan}\big[\frac{1}{2}\left(e+f x\right)\big]}{\sqrt{\text{Sec}\big[\frac{1}{2}\left(e+f x\right)\big]^2}}\right)^{1/3}\left((5+5\,i)\ \text{AppellF1}\Big[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\right.\right.$$

$$\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right)\Big]+$$

$$\left(\text{AppellF1}\Big[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\Big[\right.\right.$$

$$\frac{1}{2}\left(e+f x\right)\Big]\Big)\Big]+i\ \text{AppellF1}\Big[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right),$$

$$\left.\left.\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right)\Big]\right)\left(1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right)\right)\right)+$$

$$\Bigg(4\,\text{Cos}\Big[\frac{3}{2}\left(e+f x\right)\Big]\ \text{Csc}\Big[\frac{1}{2}\left(e+f x\right)\Big]\ \text{Sec}\Big[\frac{1}{2}\left(e+f x\right)\Big]\ \left(a\left(1+\text{Sin}[e+f x]\right)\right)^{1/3}$$

$$\left(\frac{1+\text{Tan}\big[\frac{1}{2}\left(e+f x\right)\big]}{\sqrt{\text{Sec}\big[\frac{1}{2}\left(e+f x\right)\big]^2}}\right)^{2/3}$$

$$\Big(3+$$

$$3\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 - 3\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2 +$$

$$\left(\left(\frac{3}{4}+\frac{3 i}{4}\right)\left(2^{2/3}\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right] + i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\right)\right.\right.$$

$$\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]$$

$$\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right) +$$

$$(5+5 i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(2^{2/3}\,\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right.$$

$$\left.\left.\left.\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3} - (1-i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right) \Big/$$

$$\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right] + i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right] +\right.\right.$$

$$\left.\left.\left((5+5 i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big/\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right) \Big/$$

$$\left(3 f \left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right.$$

$$\left(-\frac{1}{\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\sqrt{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}}\right)^{2/3}\left(3+3\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2-3\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2+\right.$$

$$\left(\left(\frac{3}{4}+\frac{3 i}{4}\right)\left(2^{2/3}\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.\right.\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\right.$$

$$\left.\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\right)$$

$$\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]\left(i+\text{Tan}\left[\right.\right.$$

$$\left.\left.\frac{1}{2}(e+f x)\right]\right)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$

$$(5+5 i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(2^{2/3}\,\text{Hypergeometric2F1}\left[\right.\right.$$

$$\left.\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)$$

$$\left.\left.\left.\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}-(1-i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\Big/$$

$$\left(\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\,\left(\text{AppellF1}\left[\frac{5}{3},\,\frac{1}{3},\,\frac{4}{3},\,\frac{8}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\right.\right.$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big]+i\,\text{AppellF1}\left[\frac{5}{3},\,\frac{4}{3},\,\frac{1}{3},\,\frac{8}{3},\right.$$

$$\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big]+$$

$$\left(\left(5+5\,i\right)\,\text{AppellF1}\left[\frac{2}{3},\,\frac{1}{3},\,\frac{1}{3},\,\frac{5}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\right.\right.$$

$$\left.\left.\left.\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big/\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\right)\right)+$$

$$\frac{1}{3\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\,\left(\frac{1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{\sqrt{\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2}}\right)^{1/3}}\,4\,\left(\frac{1}{2}\,\sqrt{\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2}-\right.$$

$$\left.\frac{\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)}{2\,\sqrt{\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2}}\right)\,\left(3+3\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2-3\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2+\right.$$

$$\left(\left(\frac{3}{4}+\frac{3\,i}{4}\right)\,\left(2^{2/3}\,\left(\text{AppellF1}\left[\frac{5}{3},\,\frac{1}{3},\,\frac{4}{3},\,\frac{8}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\right.\right.\right.$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big]+i\,\text{AppellF1}\left[\frac{5}{3},\,\frac{4}{3},\,\frac{1}{3},\,\frac{8}{3},\right.$$

$$\left.\left.\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big]\right)\right)$$

$$\text{Hypergeometric2F1}\left[\frac{1}{3},\,\frac{2}{3},\,\frac{5}{3},\,\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}\right]\,\left(i+\text{Tan}\Big[\right.$$

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

$$(5+5\,i)\,\text{AppellF1}\left[\frac{2}{3},\,\frac{1}{3},\,\frac{1}{3},\,\frac{5}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\right.$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\,\left(2^{2/3}\,\text{Hypergeometric2F1}\Big[\right.$$

$$\frac{1}{3},\,\frac{2}{3},\,\frac{5}{3},\,\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}\Big]\,\left(i+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)$$

$$\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}-(1-i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)\Bigg)\Bigg)\Bigg)\Big/$$

$$\Bigg(\Bigg(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)\Bigg(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\right.$$

$$\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+$$

$$\Bigg((5+5 i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\right.$$

$$\left.\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)\Big/\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)\Bigg)\Bigg)+$$

$$\frac{1}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\,2\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\sqrt{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}}\right)^{2/3}\Bigg(-\Bigg(\Bigg(\left(\frac{3}{8}+\frac{3 i}{8}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\Bigg(2^{2/3}\Bigg(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\right.$$

$$\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\Bigg)$$

$$\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]\Bigg(i+\text{Tan}\Big[$$

$$\frac{1}{2}(e+f x)\Big]\Bigg)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$

$$(5+5 i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg(2^{2/3}\,\text{Hypergeometric2F1}\Big[$$

$$\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\Big]\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)$$

$$\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}-(1-i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)\Bigg)\Bigg)\Big/$$

$$\left(\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\,\left(\text{AppellF1}\left[\frac{5}{3},\,\frac{1}{3},\,\frac{4}{3},\,\frac{8}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\right.\right.\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\,\frac{4}{3},\,\frac{1}{3},\,\frac{8}{3},\right.$$

$$\left.\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right]+$$

$$\left(\left(5+5\,i\right)\,\text{AppellF1}\left[\frac{2}{3},\,\frac{1}{3},\,\frac{1}{3},\,\frac{5}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\right.\right.$$

$$\left.\left.\left.\left.\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big/\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\right)\right)-$$

$$\left(\left(\frac{3}{4}+\frac{3\,i}{4}\right)\,\left(\left(-\frac{5}{24}+\frac{5\,i}{24}\right)\,\text{AppellF1}\left[\frac{8}{3},\,\frac{1}{3},\,\frac{7}{3},\,\frac{11}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\right.\right.\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right]\,\text{Csc}\left[\frac{1}{2}\,(e+f\,x)\right]^2-\left(\frac{5}{96}+\frac{5\,i}{96}\right)\,\text{AppellF1}\left[\frac{8}{3},\right.$$

$$\left.\frac{4}{3},\,\frac{4}{3},\,\frac{11}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right]$$

$$\text{Csc}\left[\frac{1}{2}\,(e+f\,x)\right]^2+i\,\left(\left(-\frac{5}{96}+\frac{5\,i}{96}\right)\,\text{AppellF1}\left[\frac{8}{3},\,\frac{4}{3},\,\frac{4}{3},\,\frac{11}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\right.\right.\right.$$

$$\left.\left.\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right]\,\text{Csc}\left[\frac{1}{2}\,(e+f\,x)\right]^2-$$

$$\left(\frac{5}{24}+\frac{5\,i}{24}\right)\,\text{AppellF1}\left[\frac{8}{3},\,\frac{7}{3},\,\frac{1}{3},\,\frac{11}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\right.$$

$$\left.\left.\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right]\,\text{Csc}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)-$$

$$\left(\left(\frac{5}{2}+\frac{5\,i}{2}\right)\,\text{AppellF1}\left[\frac{2}{3},\,\frac{1}{3},\,\frac{1}{3},\,\frac{5}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\right.\right.$$

$$\left.\left.\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big/$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2+\left(\left(\frac{5}{2}+\frac{5\,i}{2}\right)\,\text{AppellF1}\left[\frac{2}{3},\,\frac{1}{3},\,\frac{1}{3},\,\frac{5}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\right.\right.\right.$$

$$\left.\left.\left.\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\Big/$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)+\left(\left(5+5\,i\right)\,\left(\left(-\frac{1}{30}+\frac{i}{30}\right)\,\text{AppellF1}\left[\frac{5}{3},\,\frac{1}{3},\,\frac{4}{3},\right.\right.\right.$$

$$\left.\frac{8}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right]$$

$$\text{Csc}\left[\frac{1}{2}\,(e+f\,x)\right]^2-\left(\frac{1}{30}+\frac{i}{30}\right)\,\text{AppellF1}\left[\frac{5}{3},\,\frac{4}{3},\,\frac{1}{3},\,\frac{8}{3},\right.$$

$$\left.\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right]$$

$$\left.\left.\left.\text{Csc}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big/\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)$$

$$\Bigg(2^{2/3}\,\Big(\text{AppellF1}\Big[\frac{5}{3},\,\frac{1}{3},\,\frac{4}{3},\,\frac{8}{3},\,\Big(\frac{1}{2}+\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big),$$

$$\Big(\frac{1}{2}-\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big]+\mathrm{i}\,\text{AppellF1}\Big[\frac{5}{3},\,\frac{4}{3},\,\frac{1}{3},\,\frac{8}{3},$$

$$\Big(\frac{1}{2}+\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big),\,\Big(\frac{1}{2}-\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big]\Big)$$

$$\text{Hypergeometric2F1}\Big[\frac{1}{3},\,\frac{2}{3},\,\frac{5}{3},\,\frac{(1+\mathrm{i})+(1-\mathrm{i})\,\text{Tan}\big[\frac{1}{2}\,(e+f\,x)\big]}{2+2\,\text{Tan}\big[\frac{1}{2}\,(e+f\,x)\big]}\Big]\,\Big(\mathrm{i}+\text{Tan}\Big[$$

$$\frac{1}{2}\,(e+f\,x)\Big]\Big)\,\left(\frac{(1+\mathrm{i})\,\big(-\mathrm{i}+\text{Tan}\big[\frac{1}{2}\,(e+f\,x)\big]\big)}{1+\text{Tan}\big[\frac{1}{2}\,(e+f\,x)\big]}\right)^{1/3}\,\Big(1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)+$$

$$(5+5\,\mathrm{i})\,\text{AppellF1}\Big[\frac{2}{3},\,\frac{1}{3},\,\frac{1}{3},\,\frac{5}{3},\,\Big(\frac{1}{2}+\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big),$$

$$\Big(\frac{1}{2}-\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big]\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\,\Big(2^{2/3}\,\text{Hypergeometric2F1}\Big[$$

$$\frac{1}{3},\,\frac{2}{3},\,\frac{5}{3},\,\frac{(1+\mathrm{i})+(1-\mathrm{i})\,\text{Tan}\big[\frac{1}{2}\,(e+f\,x)\big]}{2+2\,\text{Tan}\big[\frac{1}{2}\,(e+f\,x)\big]}\Big]\,\Big(\mathrm{i}+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)$$

$$\left(\frac{(1+\mathrm{i})\,\big(-\mathrm{i}+\text{Tan}\big[\frac{1}{2}\,(e+f\,x)\big]\big)}{1+\text{Tan}\big[\frac{1}{2}\,(e+f\,x)\big]}\right)^{1/3}-(1-\mathrm{i})\,\Big(1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big)\Big)\Bigg)\Big/$$

$$\Bigg(\Big(1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\,\Big(\text{AppellF1}\Big[\frac{5}{3},\,\frac{1}{3},\,\frac{4}{3},\,\frac{8}{3},\,\Big(\frac{1}{2}+\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big),$$

$$\Big(\frac{1}{2}-\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big]+\mathrm{i}\,\text{AppellF1}\Big[\frac{5}{3},\,\frac{4}{3},\,\frac{1}{3},\,\frac{8}{3},$$

$$\Big(\frac{1}{2}+\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big),\,\Big(\frac{1}{2}-\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big]+$$

$$\Big((5+5\,\mathrm{i})\,\text{AppellF1}\Big[\frac{2}{3},\,\frac{1}{3},\,\frac{1}{3},\,\frac{5}{3},\,\Big(\frac{1}{2}+\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big),\,\Big(\frac{1}{2}-\frac{\mathrm{i}}{2}\Big)$$

$$\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big]\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big/\Big(1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big)^{2}\Bigg)+$$

$$\Bigg(\Big(\frac{3}{4}+\frac{3\,\mathrm{i}}{4}\Big)\,\Bigg(\frac{1}{2^{1/3}}\,\Big(\text{AppellF1}\Big[\frac{5}{3},\,\frac{1}{3},\,\frac{4}{3},\,\frac{8}{3},\,\Big(\frac{1}{2}+\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big),$$

$$\Big(\frac{1}{2}-\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big]+\mathrm{i}\,\text{AppellF1}\Big[\frac{5}{3},\,\frac{4}{3},\,\frac{1}{3},\,\frac{8}{3},$$

$$\Big(\frac{1}{2}+\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big),\,\Big(\frac{1}{2}-\frac{\mathrm{i}}{2}\Big)\,\Big(1+\text{Cot}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big]\Big)$$

$$\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]}\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\left(i+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]}\right)^{1/3}+$$

$$\frac{1}{2^{1/3}}\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\right.\right.$$
$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\right.$$
$$\left.\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\right)$$

$$\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]}\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]}\right)^{1/3}\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+$$

$$2^{2/3}\left(\left(-\frac{5}{24}+\frac{5i}{24}\right)\text{AppellF1}\left[\frac{8}{3},\frac{1}{3},\frac{7}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\right.\right.$$
$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\text{Csc}\left[\frac{1}{2}(e+fx)\right]^2-$$
$$\left(\frac{5}{96}+\frac{5i}{96}\right)\text{AppellF1}\left[\frac{8}{3},\frac{4}{3},\frac{4}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\right.$$
$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\text{Csc}\left[\frac{1}{2}(e+fx)\right]^2+$$
$$i\left(\left(-\frac{5}{96}+\frac{5i}{96}\right)\text{AppellF1}\left[\frac{8}{3},\frac{4}{3},\frac{4}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\right.\right.$$
$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\text{Csc}\left[\frac{1}{2}(e+fx)\right]^2-$$
$$\left(\frac{5}{24}+\frac{5i}{24}\right)\text{AppellF1}\left[\frac{8}{3},\frac{7}{3},\frac{1}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\right.$$
$$\left.\left.\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\text{Csc}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)$$

$$\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]}\right]$$

$$\left(i+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]}\right)^{1/3}$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+\frac{1}{3\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]}\right)^{2/3}}2^{2/3}\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\right.\right.$$
$$\left.\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]+$$

$$i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\Bigg)\,\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg(-\Bigg(\Bigg(\left(\left(\frac{1}{2}+\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\Bigg)+\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\Bigg)+$$

$$\left(\frac{5}{2}+\frac{5 i}{2}\right)\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\Bigg(2^{2/3}\,\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}-(1-i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)+$$

$$(5+5 i)\Bigg(\left(-\frac{1}{30}+\frac{i}{30}\right)\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Csc}\left[\frac{1}{2}(e+f x)\right]^2-\left(\frac{1}{30}+\frac{i}{30}\right)\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Csc}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]$$

$$\Bigg(2^{2/3}\,\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}-(1-i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)+\frac{1}{3\left((1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}$$

$$2\times 2^{2/3}\Bigg(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\right.$$

$$\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\Big)$$

$$\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)$$

$$\Bigg(-\Bigg(\Bigg(\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left((1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)\Big/$$

$$\left(2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\Bigg)+\frac{\left(\frac{1}{2}-\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\Bigg)$$

$$\Bigg(-\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]+$$

$$\frac{1}{\left(1-\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}}\Bigg)+(5+5\,i)\,\text{AppellF1}\Big[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},$$

$$\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg(\left(-\frac{1}{2}+\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2^{1/3}}\text{Hypergeometric2F1}\Big[$$

$$\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}+\Bigg(2^{2/3}\,\text{Hypergeometric2F1}\Big[\frac{1}{3},$$

$$\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\Big]\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)$$

$$\Bigg(-\Bigg(\Bigg(\left(\frac{1}{2}+\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)\Big/$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\Bigg)+\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\Bigg)\Bigg)\Big/$$

$$\left(3\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{2/3}\right)+\left(2\times 2^{2/3}\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right.$$

$$\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}\left(2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)$$

$$\left(-\left(\left(\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left((1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right/\right.$$

$$\left.\left(2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)+\frac{\left(\frac{1}{2}-\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)$$

$$\left(-\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]+\right.$$

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

$$\left.\left.\left.\left(3\left((1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\right)\Big/$$

$$\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.\right.\right.$$
$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\right.$$
$$\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+$$
$$\left((5+5 i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\right.\right.$$

$$\left.\left.\left.\left.\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big/\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)$$

Problem 118: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \mathrm{Cot}[e+f x]^4\,(a+a\,\mathrm{Sin}[e+f x])^{1/3}\,dx$$

Optimal (type 6, 80 leaves, 3 steps):

$$\frac{1}{17 a^3 f}12\sqrt{2}\,\mathrm{AppellF1}\left[\frac{17}{6},-\frac{3}{2},4,\frac{23}{6},\frac{1}{2}(1+\mathrm{Sin}[e+f x]),1+\mathrm{Sin}[e+f x]\right]$$
$$\mathrm{Sec}[e+f x]\sqrt{1-\mathrm{Sin}[e+f x]}\,(a+a\,\mathrm{Sin}[e+f x])^{10/3}$$

Result (type 6, 9225 leaves):

$$\frac{1}{f}\left(\frac{239}{54}+\frac{77}{54}\mathrm{Cot}[e+f x]-\frac{1}{18}\mathrm{Cot}[e+f x]\,\mathrm{Csc}[e+f x]-\frac{1}{3}\mathrm{Cot}[e+f x]\,\mathrm{Csc}[e+f x]^2\right)$$
$$(a\,(1+\mathrm{Sin}[e+f x]))^{1/3}-$$
$$\Bigg(\Bigg(\left(\frac{560}{9}+\frac{560\,i}{9}\right)\mathrm{AppellF1}\Big[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right),$$
$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\,\mathrm{Cos}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Sin}\left[\frac{1}{2}(e+f x)\right]$$
$$(a\,(1+\mathrm{Sin}[e+f x]))^{1/3}\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg(\left(5+5\,i\right)\mathrm{AppellF1}\Big[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},$$
$$\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]+$$
$$\mathrm{AppellF1}\Big[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]$$
$$\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+i\,\mathrm{AppellF1}\Big[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right),$$
$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)\Bigg)\Bigg/$$
$$\Bigg(f\left(\mathrm{Cos}\left[\frac{1}{2}(e+f x)\right]+\mathrm{Sin}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg(-400\,i$$
$$\mathrm{AppellF1}\Big[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]^2$$
$$\left(\mathrm{Cos}\left[\frac{1}{2}(e+f x)\right]-\mathrm{Sin}\left[\frac{1}{2}(e+f x)\right]\right)\mathrm{Sin}\left[\frac{1}{2}(e+f x)\right]^3+8$$
$$\Bigg(\mathrm{AppellF1}\Big[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]+$$
$$i\,\mathrm{AppellF1}\Big[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right),$$
$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\Bigg)^2\left(\mathrm{Cos}\left[\frac{1}{2}(e+f x)\right]+\mathrm{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2+$$
$$5\,\mathrm{AppellF1}\Big[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]$$
$$\Bigg(-5\,\Bigg(2\,\mathrm{AppellF1}\Big[\frac{8}{3},\frac{1}{3},\frac{7}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right),$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]+i\,\text{AppellF1}\Big[\frac{8}{3},\frac{4}{3},\frac{4}{3},\frac{11}{3},$$

$$\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]-2\,\text{AppellF1}\Big[\frac{8}{3},$$

$$\frac{7}{3},\frac{1}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\Big)$$

$$\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2+(2+2 i)\,\text{AppellF1}\Big[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},$$

$$\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]$$

$$(-2+\text{Cos}[e+f x]+\text{Cos}[2(e+f x)]-3\,\text{Sin}[e+f x])-(2-2 i)\,\text{AppellF1}\Big[\frac{5}{3},$$

$$\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]$$

$$(-2+\text{Cos}[e+f x]+\text{Cos}[2(e+f x)]-3\,\text{Sin}[e+f x])\Big)\Big)\Big)+$$

$$\Big(\Big(\frac{1420}{27}+\frac{1420 i}{27}\Big)\text{AppellF1}\Big[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]$$

$$\text{Cos}\left[\frac{1}{2}(e+f x)\right]^4\text{Csc}[e+f x]$$

$$\text{Sin}\left[\frac{1}{2}(e+f x)\right]$$

$$(a(1+\text{Sin}[e+f x]))^{1/3}$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)$$

$$\Big((5+5 i)\,\text{AppellF1}\Big[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},$$

$$\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]+$$

$$\Big(\text{AppellF1}\Big[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]+$$

$$i\,\text{AppellF1}\Big[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\Big)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big)\Big)\Big/$$

$$\Big(f\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)\Big(-8\Big(\text{AppellF1}\Big[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},$$

$$\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]+i\,\text{AppellF1}\Big[\frac{5}{3},$$

$$\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\Big)^2$$

$$\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^2+5\,\text{AppellF1}\Big[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},$$

$$\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big]$$

$$\left(5\left(2\,\text{AppellF1}\left[\frac{8}{3},\frac{1}{3},\frac{7}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{8}{3},\frac{4}{3},\frac{4}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right]-2\,\text{AppellF1}\left[\frac{8}{3},\frac{7}{3},\frac{1}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right]\right)\left(\text{Cos}\left[\frac{1}{2}(e+fx)\right]+\text{Sin}\left[\frac{1}{2}(e+fx)\right]\right)^2+(2+2i)\,\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right](2+\text{Cos}[e+fx]-\text{Cos}[2(e+fx)]+3\,\text{Sin}[e+fx])-(2-2i)\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right](2+\text{Cos}[e+fx]-\text{Cos}[2(e+fx)]+3\,\text{Sin}[e+fx])\right)-50\,i\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right]^2(3+4\,\text{Cos}[e+fx]+\text{Cos}[2(e+fx)]-2\,\text{Sin}[e+fx]-\text{Sin}[2(e+fx)])\Bigg)\Bigg)-$$

$$\Bigg(\left(\frac{239}{216}+\frac{239\,i}{216}\right)\text{Cos}\left[\frac{3}{2}(e+fx)\right]\text{Csc}[e+fx]\,(a\,(1+\text{Sin}[e+fx]))^{1/3}$$

$$\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{\sqrt{\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2}}\right)^{2/3}$$

$$\Bigg((2-2i)\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+(2-2i)\,\text{Cos}[e+fx]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+$$

$$\Bigg(2^{2/3}\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\right)$$

$$\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]}\right]$$

$$\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(\frac{(1+\mathbb{i})\left(-\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$

$$(5+5\mathbb{i})\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.$$

$$\left.\left(\frac{1}{2}-\frac{\mathbb{i}}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(2^{2/3}\,\text{Hypergeometric2F1}\left[\right.\right.$$

$$\left.\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+\mathbb{i})+(1-\mathbb{i})\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]\left(\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)$$

$$\left.\left.\left(\frac{(1+\mathbb{i})\left(-\mathbb{i}+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}-(1-\mathbb{i})\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\Big/$$

$$\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.\right.\right.$$

$$\left.\left(\frac{1}{2}-\frac{\mathbb{i}}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+\mathbb{i}\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\right.$$

$$\left.\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{\mathbb{i}}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+$$

$$\left((5+5\mathbb{i})\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{\mathbb{i}}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{\mathbb{i}}{2}\right)\right.\right.$$

$$\left.\left.\left.\left.\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big/\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\Big/$$

$$\left(f\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right.$$

$$\left(-\frac{1}{\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2}\left(\frac{3}{8}+\frac{3\mathbb{i}}{8}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{\sqrt{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}}\right)^{2/3}\right.$$

$$\left((2-2\mathbb{i})\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+(2-2\mathbb{i})\,\text{Cos}[e+f x]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\right.$$

$$\left(2^{2/3}\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\right)\right.$$

$$\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]}\right]\left(i+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]}\right)^{1/3}\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+$$

$$(5+5\,i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]\left(2^{2/3}\,\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]}\right]\left(i+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]}\right)^{1/3}-(1-i)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\Bigg/$$

$$\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]+\left((5+5\,i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\Big/\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)+$$

$$\frac{1}{\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{\sqrt{\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2}}\right)^{1/3}}\left(\frac{1}{2}+\frac{i}{2}\right)\left(\frac{1}{2}\sqrt{\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2}-\right.$$

$$\left.\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{2\sqrt{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}}\right)$$

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

$$\left(2^{2/3}\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.\right.\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\right.$$

$$\left.\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\right)$$

$$\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]$$

$$\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$

$$(5+5\,i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\right.$$

$$\left.\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(2^{2/3}\,\text{Hypergeometric2F1}\left[\frac{1}{3},\right.\right.$$

$$\left.\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)$$

$$\left.\left.\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}-(1-i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\Big/$$

$$\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.\right.\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\right.$$

$$\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+$$

$$\left((5+5\,i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\right.\right.$$

$$\left.\left.\left.\left.\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big/\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)+$$

$$\frac{1}{1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}\left(\frac{3}{4}+\frac{3\,i}{4}\right)\left(\frac{1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}{\sqrt{\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2}}\right)^{2/3}$$

$$\left(\left(-2+2\,i\right)\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\text{Sin}[e+f x]+\left(2-2\,i\right)\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+\right.$$

$$\left(2-2\,i\right)\text{Cos}[e+f x]\,\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]-$$

$$\left(\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\left(2^{2/3}\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\right),\right.\right.\right.$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\Big]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\right.$$

$$\left.\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\right]\right)$$

$$\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{\left(1+i\right)+\left(1-i\right)\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}\right]\left(i+\text{Tan}\left[\right.\right.$$

$$\left.\left.\frac{1}{2}\left(e+f x\right)\right]\right)\left(\frac{\left(1+i\right)\left(-i+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}\right)^{1/3}\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)+$$

$$\left(5+5\,i\right)\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\right),\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\right]\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\left(2^{2/3}\,\text{Hypergeometric2F1}\left[\right.\right.$$

$$\left.\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{\left(1+i\right)+\left(1-i\right)\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}\right]\left(i+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)$$

$$\left.\left.\left.\left.\left(\frac{\left(1+i\right)\left(-i+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}\right)^{1/3}-\left(1-i\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\right)\right)\right)\right)\Big/$$

$$\left(2\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^2\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\right),\right.\right.\right.$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\Big]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\right.$$

$$\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\right]+$$

$$\left(\left(5+5\,i\right)\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\right.\right.$$

$$\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big)\Big/\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big)\Big)-$$

$$\Bigg(\Bigg(\Bigg(\left(-\frac{5}{24}+\frac{5\,i}{24}\right)\text{AppellF1}\left[\frac{8}{3},\frac{1}{3},\frac{7}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Csc}\left[\frac{1}{2}(e+f x)\right]^2-\left(\frac{5}{96}+\frac{5\,i}{96}\right)\text{AppellF1}\left[\frac{8}{3},\right.$$

$$\left.\frac{4}{3},\frac{4}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]$$

$$\text{Csc}\left[\frac{1}{2}(e+f x)\right]^2+i\,\Bigg(\left(-\frac{5}{96}+\frac{5\,i}{96}\right)\text{AppellF1}\left[\frac{8}{3},\frac{4}{3},\frac{4}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\right.\right.$$

$$\left.\left.\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Csc}\left[\frac{1}{2}(e+f x)\right]^2-$$

$$\left(\frac{5}{24}+\frac{5\,i}{24}\right)\text{AppellF1}\left[\frac{8}{3},\frac{7}{3},\frac{1}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\right.$$

$$\left.\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Csc}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)-\Bigg(\left(\frac{5}{2}+\frac{5\,i}{2}\right)\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\right.$$

$$\left.\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)\Big/\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2+$$

$$\Bigg(\left(\frac{5}{2}+\frac{5\,i}{2}\right)\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\right.$$

$$\left.\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Big/\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$

$$\Bigg((5+5\,i)\,\Bigg(\left(-\frac{1}{30}+\frac{i}{30}\right)\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Csc}\left[\frac{1}{2}(e+f x)\right]^2-$$

$$\left(\frac{1}{30}+\frac{i}{30}\right)\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Csc}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)\Big/$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)\Bigg(2^{2/3}\Bigg(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\right.\right.$$

$$\left.\left.\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\right.$$

$$\left.\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\Bigg)$$

$$\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]\left(i+\text{Tan}\left[\right.\right.$$

$$\left.\left.\frac{1}{2}(e+f x)\right]\right)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$

$$\left(5+5\,i\right)\,\text{AppellF1}\left[\frac{2}{3},\,\frac{1}{3},\,\frac{1}{3},\,\frac{5}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right),\right.$$
$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\right]\,\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\,\left(2^{2/3}\,\text{Hypergeometric2F1}\left[\right.\right.$$
$$\left.\frac{1}{3},\,\frac{2}{3},\,\frac{5}{3},\,\frac{\left(1+i\right)+\left(1-i\right)\,\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}\right]\,\left(i+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)$$
$$\left.\left.\left.\left.\left(\frac{\left(1+i\right)\,\left(-i+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}\right)^{1/3}-\left(1-i\right)\,\left(1+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\right)\right)\right)\right)\Big/$$
$$\left(\left(1+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\,\left(\text{AppellF1}\left[\frac{5}{3},\,\frac{1}{3},\,\frac{4}{3},\,\frac{8}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right),\right.\right.$$
$$\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\,\frac{4}{3},\,\frac{1}{3},\,\frac{8}{3},$$
$$\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\right]+$$
$$\left(\left(5+5\,i\right)\,\text{AppellF1}\left[\frac{2}{3},\,\frac{1}{3},\,\frac{1}{3},\,\frac{5}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\right.\right.$$
$$\left.\left.\left.\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\right]\,\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\Big/\,\left(1+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\right)^2\right)+$$
$$\left(\frac{1}{2^{1/3}}\,\left(\text{AppellF1}\left[\frac{5}{3},\,\frac{1}{3},\,\frac{4}{3},\,\frac{8}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\right.\right.\right.$$
$$\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\,\frac{4}{3},\,\frac{1}{3},\,\frac{8}{3},$$
$$\left.\left.\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\right]\right)$$
$$\text{Hypergeometric2F1}\left[\frac{1}{3},\,\frac{2}{3},\,\frac{5}{3},\,\frac{\left(1+i\right)+\left(1-i\right)\,\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}\right]$$
$$\text{Sec}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]^2\,\left(i+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\,\left(\frac{\left(1+i\right)\,\left(-i+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}\right)^{1/3}+$$
$$\frac{1}{2^{1/3}}\,\left(\text{AppellF1}\left[\frac{5}{3},\,\frac{1}{3},\,\frac{4}{3},\,\frac{8}{3},\,\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right),\right.$$
$$\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\,\frac{4}{3},\,\frac{1}{3},\,\frac{8}{3},$$
$$\left.\left(\frac{1}{2}+\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right),\,\left(\frac{1}{2}-\frac{i}{2}\right)\,\left(1+\text{Cot}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]\right)\right]\right)$$
$$\text{Hypergeometric2F1}\left[\frac{1}{3},\,\frac{2}{3},\,\frac{5}{3},\,\frac{\left(1+i\right)+\left(1-i\right)\,\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}\,\left(e+f\,x\right)\right]}\right]$$

$$\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\left(\frac{(1+i)\left(-i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}\right)^{1/3}\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+$$

$$2^{2/3}\left(\left(-\frac{5}{24}+\frac{5i}{24}\right)\mathrm{AppellF1}\left[\frac{8}{3},\frac{1}{3},\frac{7}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\right.\right.$$
$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\mathrm{Csc}\left[\frac{1}{2}(e+fx)\right]^2-\left(\frac{5}{96}+\frac{5i}{96}\right)\mathrm{AppellF1}\left[\frac{8}{3},\right.$$
$$\left.\frac{4}{3},\frac{4}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]$$
$$\mathrm{Csc}\left[\frac{1}{2}(e+fx)\right]^2+i\left(\left(-\frac{5}{96}+\frac{5i}{96}\right)\mathrm{AppellF1}\left[\frac{8}{3},\frac{4}{3},\frac{4}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\right.\right.\right.$$
$$\left.\left.\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\mathrm{Csc}\left[\frac{1}{2}(e+fx)\right]^2-$$
$$\left(\frac{5}{24}+\frac{5i}{24}\right)\mathrm{AppellF1}\left[\frac{8}{3},\frac{7}{3},\frac{1}{3},\frac{11}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\right.$$
$$\left.\left.\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\mathrm{Csc}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)$$

$$\mathrm{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}{2+2\,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}\right]$$

$$\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\left(\frac{(1+i)\left(-i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}\right)^{1/3}\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+$$

$$\frac{1}{3\left(\frac{(1+i)\left(-i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)}{1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}\right)^{2/3}}\,2^{2/3}\left(\mathrm{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\right.\right.$$
$$\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]+$$
$$i\,\mathrm{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\right.$$
$$\left.\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right)\right]\right)\mathrm{Hypergeometric2F1}\left[\frac{1}{3},\right.$$
$$\left.\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}{2+2\,\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}\right]\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)$$

$$\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\left(-\left(\left(\left(\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\left(-i+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right/\right.\right.$$
$$\left.\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^2\right)+\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2}{1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]}\right)+$$

$$\left(\frac{5}{2}+\frac{5i}{2}\right)\mathrm{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+fx)\right]\right),\right.$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\ \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\Bigg(2^{2/3}\ \text{Hypergeometric2F1}\Big[$$

$$\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]}\Big]\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)$$

$$\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}-(1-i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)+$$

$$(5+5 i)\left(\left(-\frac{1}{30}+\frac{i}{30}\right)\text{AppellF1}\Big[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.$$

$$\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\ \text{Csc}\left[\frac{1}{2}(e+f x)\right]^2-\left(\frac{1}{30}+\frac{i}{30}\right)\text{AppellF1}\Big[\frac{5}{3},$$

$$\frac{4}{3},\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]$$

$$\left.\text{Csc}\left[\frac{1}{2}(e+f x)\right]^2\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg(2^{2/3}\ \text{Hypergeometric2F1}\Big[\frac{1}{3},$$

$$\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]}\Big]\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)$$

$$\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}-(1-i)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)+$$

$$\frac{1}{3\left((1+i)+(1-i)\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}\,2\times 2^{2/3}\Bigg(\text{AppellF1}\Big[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)$$

$$\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]+i\ \text{AppellF1}\Big[\frac{5}{3},\frac{4}{3},$$

$$\frac{1}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\Big]\Bigg)$$

$$\left(i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(\frac{(1+i)\left(-i+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(2+2\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg(-\Bigg(\Bigg(\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\left((1+i)+(1-i)\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)\Big/\left(2+2\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\Bigg)+$$

$$\frac{\left(\frac{1}{2}-\frac{i}{2}\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2+2\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]}\Bigg)\Bigg(-\text{Hypergeometric2F1}\Big[\frac{1}{3},\frac{2}{3},\frac{5}{3},$$

$$\left.\left.\frac{(1+i)+(1-i)\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]+\frac{1}{\left(1-\frac{(1+i)+(1-i)\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}}\right)+$$

$$(5+5\,i)\,\mathrm{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\right.$$

$$\left.\left(1+\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\left(\left(-\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\right.$$

$$\frac{1}{2^{1/3}}\mathrm{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]$$

$$\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(\frac{(1+i)\left(-i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}+$$

$$\left(2^{2/3}\,\mathrm{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]\left(i+\mathrm{Tan}\left[\right.\right.\right.$$

$$\left.\left.\frac{1}{2}(e+f x)\right]\right)\left(-\left(\left(\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right/\right.$$

$$\left.\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)+\frac{\left(\frac{1}{2}+\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)\right)\Bigg/$$

$$\left(3\left(\frac{(1+i)\left(-i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{2/3}\right)+\left(2\times 2^{2/3}\left(i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right.$$

$$\left(\frac{(1+i)\left(-i+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)}{1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}\left(2+2\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)$$

$$\left(-\left(\left(\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left((1+i)+(1-i)\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right/\right.$$

$$\left.\left.\left(2+2\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)+\frac{\left(\frac{1}{2}-\frac{i}{2}\right)\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2+2\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)$$

$$\left(-\text{Hypergeometric2F1}\left[\frac{1}{3},\frac{2}{3},\frac{5}{3},\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right]+\right.$$

$$\left.\left.\left.\frac{1}{\left(1-\frac{(1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{2+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]}\right)^{1/3}}\right)\right)\right/$$

$$\left.\left.\left(3\left((1+i)+(1-i)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right/$$

$$\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(\text{AppellF1}\left[\frac{5}{3},\frac{1}{3},\frac{4}{3},\frac{8}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\right.\right.\right.$$

$$\left.\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+i\,\text{AppellF1}\left[\frac{5}{3},\frac{4}{3},\frac{1}{3},\frac{8}{3},\right.$$

$$\left.\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]+$$

$$\left((5+5 i)\,\text{AppellF1}\left[\frac{2}{3},\frac{1}{3},\frac{1}{3},\frac{5}{3},\left(\frac{1}{2}+\frac{i}{2}\right)\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right),\left(\frac{1}{2}-\frac{i}{2}\right)\right.\right.$$

$$\left.\left.\left.\left.\left.\left(1+\text{Cot}\left[\frac{1}{2}(e+f x)\right]\right)\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right/\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)$$

Problem 119: Result unnecessarily involves higher level functions.

$$\int\frac{\text{Tan}[e+f x]^4}{(a+a\,\text{Sin}[e+f x])^{1/3}}\,dx$$

Optimal (type 4, 551 leaves, 8 steps):

$$\frac{973\,\mathrm{Sec}[e+f x]}{396\,f\,(a+a\,\mathrm{Sin}[e+f x])^{1/3}}-\frac{973\,\mathrm{Sec}[e+f x]\,(1-\mathrm{Sin}[e+f x])}{495\,f\,(a+a\,\mathrm{Sin}[e+f x])^{1/3}}-\frac{\mathrm{Sec}[e+f x]\,(95\,a+356\,a\,\mathrm{Sin}[e+f x])}{132\,f\,(1-\mathrm{Sin}[e+f x])\,(a+a\,\mathrm{Sin}[e+f x])^{4/3}}+$$

$$\left(973\,\mathrm{EllipticF}\left[\mathrm{ArcCos}\left[\frac{2^{1/3}\,a^{1/3}-\left(1-\sqrt{3}\right)\,(a+a\,\mathrm{Sin}[e+f x])^{1/3}}{2^{1/3}\,a^{1/3}-\left(1+\sqrt{3}\right)\,(a+a\,\mathrm{Sin}[e+f x])^{1/3}}\right],\frac{1}{4}\left(2+\sqrt{3}\right)\right]\right.$$

$$\mathrm{Sec}[e+f x]\,(a+a\,\mathrm{Sin}[e+f x])^{2/3}\,\left(2^{1/3}\,a^{1/3}-(a+a\,\mathrm{Sin}[e+f x])^{1/3}\right)$$

$$\left.\sqrt{\left(\left(2^{2/3}\,a^{2/3}+2^{1/3}\,a^{1/3}\,(a+a\,\mathrm{Sin}[e+f x])^{1/3}+(a+a\,\mathrm{Sin}[e+f x])^{2/3}\right)\Big/\left(2^{1/3}\,a^{1/3}-\left(1+\sqrt{3}\right)\,(a+a\,\mathrm{Sin}[e+f x])^{1/3}\right)^2\right)}\right)\Bigg/$$

$$\left(495\times 2^{1/3}\times 3^{1/4}\,a^{4/3}\,f\,\sqrt{-\frac{(a+a\,\mathrm{Sin}[e+f x])^{1/3}\,\left(2^{1/3}\,a^{1/3}-(a+a\,\mathrm{Sin}[e+f x])^{1/3}\right)}{\left(2^{1/3}\,a^{1/3}-\left(1+\sqrt{3}\right)\,(a+a\,\mathrm{Sin}[e+f x])^{1/3}\right)^2}}\right)+$$

$$\frac{3\,a^2\,\mathrm{Sin}[e+f x]\,\mathrm{Tan}[e+f x]}{4\,f\,(a-a\,\mathrm{Sin}[e+f x])\,(a+a\,\mathrm{Sin}[e+f x])^{4/3}}+\frac{3\,a^2\,\mathrm{Sin}[e+f x]^2\,\mathrm{Tan}[e+f x]}{f\,(a-a\,\mathrm{Sin}[e+f x])\,(a+a\,\mathrm{Sin}[e+f x])^{4/3}}$$

Result (type 5, 128 leaves):

$$\left(973\,\sqrt{2}\,\mathrm{Cos}[e+f x]\,\mathrm{Hypergeometric2F1}\left[\frac{1}{6},\frac{1}{2},\frac{7}{6},\mathrm{Sin}\left[\frac{1}{4}\,(2\,e+\pi+2\,f\,x)\right]^2\right]+\mathrm{Sec}[e+f x]^3\right.$$

$$\left.\sqrt{1-\mathrm{Sin}[e+f x]}\,\left(-49-64\,\mathrm{Cos}[2\,(e+f x)]+22\,\mathrm{Sin}[e+f x]-128\,\mathrm{Sin}[3\,(e+f x)]\right)\right)\Big/$$

$$\left(495\,f\,\sqrt{1-\mathrm{Sin}[e+f x]}\,\left(a\,(1+\mathrm{Sin}[e+f x])\right)^{1/3}\right)$$

Problem 121: Unable to integrate problem.

$$\int\frac{\mathrm{Cot}[e+f x]^2}{(a+a\,\mathrm{Sin}[e+f x])^{1/3}}\,dx$$

Optimal (type 6, 80 leaves, 3 steps):

$$\frac{1}{7\,a^2\,f}6\,\sqrt{2}\,\mathrm{AppellF1}\left[\frac{7}{6},-\frac{1}{2},2,\frac{13}{6},\frac{1}{2}\,(1+\mathrm{Sin}[e+f x]),1+\mathrm{Sin}[e+f x]\right]$$

$$\mathrm{Sec}[e+f x]\,\sqrt{1-\mathrm{Sin}[e+f x]}\,(a+a\,\mathrm{Sin}[e+f x])^{5/3}$$

Result (type 8, 25 leaves):

$$\int\frac{\mathrm{Cot}[e+f x]^2}{(a+a\,\mathrm{Sin}[e+f x])^{1/3}}\,dx$$

Problem 122: Unable to integrate problem.

$$\int \frac{\text{Cot}[e+f x]^4}{(a+a\,\text{Sin}[e+f x])^{1/3}}\,dx$$

Optimal (type 6, 80 leaves, 3 steps):

$$\frac{1}{13 a^3 f} 12 \sqrt{2}\,\text{AppellF1}\left[\frac{13}{6}, -\frac{3}{2}, 4, \frac{19}{6}, \frac{1}{2}(1+\text{Sin}[e+f x]), 1+\text{Sin}[e+f x]\right] \text{Sec}[e+f x] \sqrt{1-\text{Sin}[e+f x]}\,(a+a\,\text{Sin}[e+f x])^{8/3}$$

Result (type 8, 25 leaves):

$$\int \frac{\text{Cot}[e+f x]^4}{(a+a\,\text{Sin}[e+f x])^{1/3}}\,dx$$

Problem 123: Attempted integration timed out after 120 seconds.

$$\int (a+a\,\text{Sin}[e+f x])^3\,(g\,\text{Tan}[e+f x])^p\,dx$$

Optimal (type 5, 269 leaves, 10 steps):

$$\frac{a^3\,\text{Hypergeometric2F1}\left[1, \frac{1+p}{2}, \frac{3+p}{2}, -\text{Tan}[e+f x]^2\right] (g\,\text{Tan}[e+f x])^{1+p}}{f g (1+p)} + \frac{1}{f g (2+p)} 3 a^3 \left(\text{Cos}[e+f x]^2\right)^{\frac{1+p}{2}} \text{Hypergeometric2F1}\left[\frac{1+p}{2}, \frac{2+p}{2}, \frac{4+p}{2}, \text{Sin}[e+f x]^2\right] \text{Sin}[e+f x]\,(g\,\text{Tan}[e+f x])^{1+p} + \frac{1}{f g (4+p)} a^3 \left(\text{Cos}[e+f x]^2\right)^{\frac{1+p}{2}} \text{Hypergeometric2F1}\left[\frac{1+p}{2}, \frac{4+p}{2}, \frac{6+p}{2}, \text{Sin}[e+f x]^2\right] \text{Sin}[e+f x]^3\,(g\,\text{Tan}[e+f x])^{1+p} + \frac{1}{f g^3 (3+p)} 3 a^3\,\text{Hypergeometric2F1}\left[2, \frac{3+p}{2}, \frac{5+p}{2}, -\text{Tan}[e+f x]^2\right] (g\,\text{Tan}[e+f x])^{3+p}$$

Result (type 1, 1 leaves):

???

Problem 124: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int (a+a\,\text{Sin}[e+f x])^2\,(g\,\text{Tan}[e+f x])^p\,dx$$

Optimal (type 5, 187 leaves, 8 steps):

$$\frac{a^2\,\text{Hypergeometric2F1}\left[1,\,\frac{1+p}{2},\,\frac{3+p}{2},\,-\text{Tan}[e+f\,x]^2\right]\,\left(g\,\text{Tan}[e+f\,x]\right)^{1+p}}{f\,g\,(1+p)}+\frac{1}{f\,g\,(2+p)}$$

$$2\,a^2\,\left(\text{Cos}[e+f\,x]^2\right)^{\frac{1+p}{2}}\,\text{Hypergeometric2F1}\left[\frac{1+p}{2},\,\frac{2+p}{2},\,\frac{4+p}{2},\,\text{Sin}[e+f\,x]^2\right]$$

$$\text{Sin}[e+f\,x]\,\left(g\,\text{Tan}[e+f\,x]\right)^{1+p}+\frac{1}{f\,g^3\,(3+p)}$$

$$a^2\,\text{Hypergeometric2F1}\left[2,\,\frac{3+p}{2},\,\frac{5+p}{2},\,-\text{Tan}[e+f\,x]^2\right]\,\left(g\,\text{Tan}[e+f\,x]\right)^{3+p}$$

Result (type 6, 9890 leaves):

$$\Bigg(2^{1+p}\,(a+a\,\text{Sin}[e+f\,x])^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^p\,\Bigg(\Bigg(\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\Bigg)\Bigg/$$

$$\Bigg((1+p)\,\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]-$$

$$2\,\Bigg(\text{AppellF1}\left[\frac{3+p}{2},\,p,\,2,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]-$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},\,1+p,\,1,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\Bigg)$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\Bigg)+\Bigg(4\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,2,\,\frac{3+p}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\Bigg)\Bigg/$$

$$\Bigg((1+p)\,\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,2,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$2\,\Bigg(-2\,\text{AppellF1}\left[\frac{3+p}{2},\,p,\,3,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},\,1+p,\,2,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\Bigg)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(4\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,3,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\Bigg)\Bigg/$$

$$\Bigg((1+p)\,\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,3,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$2\,\Bigg(-3\,\text{AppellF1}\left[\frac{3+p}{2},\,p,\,4,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},\,1+p,\,3,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\Bigg)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\Bigg)+$$

$$\left(4\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\Big/$$

$$\left(\left(2+p\right)\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\right)\text{Tan}[e+f x]^{-p}\left(g\,\text{Tan}[e+f x]\right)^p$$

$$\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]^4\text{Tan}[e+f x]^p+4\,\text{Cos}\left[\frac{1}{2}(e+f x)\right]^3\text{Sin}\left[\frac{1}{2}(e+f x)\right]\text{Tan}[e+f x]^p+6\,\text{Cos}\left[\frac{1}{2}(e+f x)\right]^2\text{Sin}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}[e+f x]^p+4\,\text{Cos}\left[\frac{1}{2}(e+f x)\right]\text{Sin}\left[\frac{1}{2}(e+f x)\right]^3\text{Tan}[e+f x]^p+\text{Sin}\left[\frac{1}{2}(e+f x)\right]^4\text{Tan}[e+f x]^p\right)\Big/$$

$$\left(f\left(\text{Cos}\left[\frac{1}{2}(e+f x)\right]+\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right)^4\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^3\right.$$

$$\left(-\frac{1}{\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^4}3\times 2^{1+p}\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\right.$$

$$\left(\left(\left(3+p\right)\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right)\Big/\left(\left(1+p\right)\left(\left(3+p\right)\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-2\left(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+$$

$$\left(4\left(3+p\right)\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\Bigg)\Bigg/\Bigg(\,(1+p)\,\Bigg(\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,2,\,\frac{3+p}{2},\right.$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]+2\,\Bigg(-2\,\text{AppellF1}\left[\frac{3+p}{2},\,p,\,3,\,\frac{5+p}{2},\right.$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]+p\,\text{AppellF1}\left[\frac{3+p}{2},\,1+p,\,2,\right.$$

$$\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Bigg)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(4\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,3,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\Bigg)\Bigg/$$

$$\Bigg(\,(1+p)\,\Bigg(\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,3,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]+2\,\Bigg(-3\,\text{AppellF1}\left[\frac{3+p}{2},\,p,\,4,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]+p\,\text{AppellF1}\left[\frac{3+p}{2},\,1+p,\,3,\,\frac{5+p}{2},\right.$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Bigg)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(4\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\Bigg)\Bigg/\Bigg(\,(2+p)\,\Bigg(\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\right.$$

$$\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]+2\,\Bigg(-2\,\text{AppellF1}\left[\frac{4+p}{2},\,p,\,3,\right.$$

$$\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]+p\,\text{AppellF1}\left[\frac{4+p}{2},\,1+p,\right.$$

$$2,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Bigg)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\Bigg)\Bigg)+$$

$$\frac{1}{\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^3}\,2^p\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\left(-\frac{\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^p$$

$$\Bigg(\Bigg(\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\Bigg)\Bigg/\Bigg(\,(1+p)\,\Bigg(\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\right.$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]-2\,\Bigg(\text{AppellF1}\left[\frac{3+p}{2},\,p,\,2,\,\frac{5+p}{2},\right.$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]-p\,\text{AppellF1}\left[\frac{3+p}{2},\,1+p,\,1,\right.$$

$$\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Bigg)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(4\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,2,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\Bigg)\Bigg/\Bigg(\,(1+p)\,\Bigg(\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,2,\,\frac{3+p}{2},\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)-$$

$$\left(4(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\Big/$$

$$\Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(-3\,\text{AppellF1}\left[\frac{3+p}{2},p,4,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)+$$

$$\left(4(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\Big/$$

$$\Bigg((2+p)\Bigg((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)\Bigg)+$$

$$\frac{1}{\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^3}2^{1+p}\,p\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-1+p}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}\right)$$

$$\Bigg(\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\Bigg)\Big/\Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-2\left(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(4(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Bigg) \Bigg/ \Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)-$$

$$\left(4(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\Bigg/$$

$$\Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(-3\,\text{AppellF1}\left[\frac{3+p}{2},p,4,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)+$$

$$\left(4(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\Bigg/$$

$$\Bigg((2+p)\Bigg((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)\Bigg)+$$

$$\frac{1}{\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^3}\,2^{1+p}\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p$$

$$\Bigg(\Bigg(2(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Bigg)\Bigg/$$

$$\Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-2\left(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)+$$

$$\left(\left(3+p\right)\left(-\frac{1}{3+p}\left(1+p\right)\text{AppellF1}\left[1+\frac{1+p}{2},p,2,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+fx\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]+\frac{1}{3+p}p\left(1+p\right)\text{AppellF1}\left[1+\frac{1+p}{2},1+p,1,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+fx\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right)^2\right)\Big/$$

$$\left(\left(1+p\right)\left(\left(3+p\right)\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]-2\left(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]-p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right)\right)+$$

$$\left(4\left(3+p\right)\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+fx\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]\right)\Big/$$

$$\left(\left(1+p\right)\left(\left(3+p\right)\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right)\right)+$$

$$\left(4\left(3+p\right)\left(-\frac{1}{3+p}2\left(1+p\right)\text{AppellF1}\left[1+\frac{1+p}{2},p,3,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+fx\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]+\frac{1}{3+p}p\left(1+p\right)\text{AppellF1}\left[1+\frac{1+p}{2},1+p,2,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+fx\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right)\right)\Big/$$

$$\left(\left(1+p\right)\left(\left(3+p\right)\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2\right)\right)-$$

$$\left(4\left(3+p\right)\left(-\frac{1}{3+p}3\left(1+p\right)\text{AppellF1}\left[1+\frac{1+p}{2},p,4,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+fx\right)\right]^2,\right.\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3+p}$$
$$p\,(1+p)\ \text{AppellF1}\Big[1+\frac{1+p}{2},1+p,3,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$
$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)\Big)\Big/$$
$$\Big((1+p)\ \Big((3+p)\ \text{AppellF1}\Big[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+$$
$$2\ \Big(-3\,\text{AppellF1}\Big[\frac{3+p}{2},p,4,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+$$
$$p\,\text{AppellF1}\Big[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$
$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\ \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big)+$$
$$\Big(4\,(4+p)\ \text{AppellF1}\Big[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big/$$
$$\Big((2+p)\ \Big((4+p)\ \text{AppellF1}\Big[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+$$
$$2\ \Big(-2\,\text{AppellF1}\Big[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+$$
$$p\,\text{AppellF1}\Big[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$
$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\ \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big)+$$
$$\Big(2\,(4+p)\ \text{AppellF1}\Big[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Big)\Big/$$
$$\Big((2+p)\ \Big((4+p)\ \text{AppellF1}\Big[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+$$
$$2\ \Big(-2\,\text{AppellF1}\Big[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+$$
$$p\,\text{AppellF1}\Big[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$
$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\ \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big)+$$
$$\Big(4\,(4+p)\ \text{Tan}\left[\frac{1}{2}(e+fx)\right]\ \Big(-\frac{1}{4+p}2\,(2+p)\ \text{AppellF1}\Big[1+\frac{2+p}{2},p,3,1+\frac{4+p}{2},$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$
$$\frac{1}{4+p}p\,(2+p)\ \text{AppellF1}\Big[1+\frac{2+p}{2},1+p,2,1+\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$
$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Big)\Big/\Bigg(\left(2+p\right)\Bigg((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\Bigg(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(\left(3+p\right)\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2$$

$$\Bigg(-2\Bigg(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg)$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+(3+p)\Bigg(-\frac{1}{3+p}(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},p,2,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{3+p}p\,(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},1+p,1,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)-$$

$$2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg(-\frac{1}{5+p}2\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},p,3,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$

$$\frac{1}{5+p}p\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},1+p,2,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]-$$

$$p\Bigg(-\frac{1}{5+p}(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},1+p,2,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{5+p}$$

$$(1+p)\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},2+p,1,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)\Bigg)\Bigg)\Bigg)\Big/$$

$$\Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-2\Bigg(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)^2\Big)-$$

$$\Big(4\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)$$

$$\Big(2\,\Big(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big)$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+(3+p)\,\Big(-\frac{1}{3+p}2\,(1+p)$$

$$\text{AppellF1}\left[1+\frac{1+p}{2},p,3,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3+p}p\,(1+p)\,\text{AppellF1}\Big[$$

$$1+\frac{1+p}{2},1+p,2,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)+2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2$$

$$\Big(-2\,\Big(-\frac{1}{5+p}3\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},p,4,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{5+p}$$

$$p\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},1+p,3,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)+$$

$$p\,\Big(-\frac{1}{5+p}2\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},1+p,3,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{5+p}$$

$$(1+p)\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},2+p,2,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)\Big)\Big)\Big)\Big/$$

$$\Big(\,(1+p)\,\Big(\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$2\,\Big(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)^2\Big)+$$

$$\Big(4\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\left(2\left(-3\,\text{AppellF1}\left[\frac{3+p}{2},p,4,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.\right.$$
$$\left.p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+(3+p)\left(-\frac{1}{3+p}3\,(1+p)\right.$$
$$\text{AppellF1}\left[1+\frac{1+p}{2},p,4,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3+p}p\,(1+p)\,\text{AppellF1}\left[\right.$$
$$\left.1+\frac{1+p}{2},1+p,3,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$
$$\left.\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2$$
$$\left(-3\left(-\frac{1}{5+p}4\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},p,5,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{5+p}$$
$$p\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},1+p,4,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+$$
$$p\left(-\frac{1}{5+p}3\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},1+p,4,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{5+p}$$
$$(1+p)\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},2+p,3,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\right)\Big/$$
$$\left((1+p)\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.\right.$$
$$2\left(-3\,\text{AppellF1}\left[\frac{3+p}{2},p,4,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right)-$$
$$\left(4\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)$$
$$\left(2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.\right.$$
$$\left.p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \text{Tan}\left[\frac{1}{2}(e+fx)\right] + (4+p)\left(-\frac{1}{4+p}2(2+p)\right.$$
$$\text{AppellF1}\left[1+\frac{2+p}{2}, p, 3, 1+\frac{4+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \text{Tan}\left[\frac{1}{2}(e+fx)\right] + \frac{1}{4+p}p(2+p)\,\text{AppellF1}\Big[$$
$$1+\frac{2+p}{2}, 1+p, 2, 1+\frac{4+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]$$
$$\left.\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \text{Tan}\left[\frac{1}{2}(e+fx)\right]\right) + 2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2$$
$$\left(-2\left(-\frac{1}{6+p}3(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2}, p, 4, 1+\frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \text{Tan}\left[\frac{1}{2}(e+fx)\right] + \frac{1}{6+p}$$
$$p(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2}, 1+p, 3, 1+\frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \text{Tan}\left[\frac{1}{2}(e+fx)\right]\right) +$$
$$p\left(-\frac{1}{6+p}2(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2}, 1+p, 3, 1+\frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \text{Tan}\left[\frac{1}{2}(e+fx)\right] + \frac{1}{6+p}$$
$$(1+p)(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2}, 2+p, 2, 1+\frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\right) \Big/$$
$$\left((2+p)\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2}, p, 2, \frac{4+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] +\right.\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2}, p, 3, \frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] +\right.$$
$$p\,\text{AppellF1}\left[\frac{4+p}{2}, 1+p, 2, \frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right)\right)$$

Problem 125: Unable to integrate problem.

$$\int (a+a\,\text{Sin}[e+fx])\,(g\,\text{Tan}[e+fx])^p\,dx$$

Optimal (type 5, 129 leaves, 6 steps):

$$\frac{a\,\text{Hypergeometric2F1}\left[1,\frac{1+p}{2},\frac{3+p}{2},-\text{Tan}[e+f\,x]^2\right]\,(g\,\text{Tan}[e+f\,x])^{1+p}}{f\,g\,(1+p)}+$$

$$\frac{1}{f\,g\,(2+p)}a\,\left(\text{Cos}[e+f\,x]^2\right)^{\frac{1+p}{2}}$$

$$\text{Hypergeometric2F1}\left[\frac{1+p}{2},\frac{2+p}{2},\frac{4+p}{2},\text{Sin}[e+f\,x]^2\right]\text{Sin}[e+f\,x]\,(g\,\text{Tan}[e+f\,x])^{1+p}$$

Result (type 8, 23 leaves) :

$$\int(a+a\,\text{Sin}[e+f\,x])\,(g\,\text{Tan}[e+f\,x])^p\,dx$$

Problem 126: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int\frac{(g\,\text{Tan}[e+f\,x])^p}{a+a\,\text{Sin}[e+f\,x]}\,dx$$

Optimal (type 5, 108 leaves, 4 steps) :

$$\frac{(g\,\text{Tan}[e+f\,x])^{1+p}}{a\,f\,g\,(1+p)}-\frac{1}{a\,f\,g^2\,(2+p)}\left(\text{Cos}[e+f\,x]^2\right)^{\frac{3+p}{2}}$$

$$\text{Hypergeometric2F1}\left[\frac{2+p}{2},\frac{3+p}{2},\frac{4+p}{2},\text{Sin}[e+f\,x]^2\right]\text{Sec}[e+f\,x]\,(g\,\text{Tan}[e+f\,x])^{2+p}$$

Result (type 6, 2539 leaves) :

$$\left(2\,(2+p)\,\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right],-\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right]\right.$$

$$\left(-1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^{-p}\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^{-2-p}$$

$$\left.\left(-1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right)^p\text{Tan}[e+f\,x]^p\,(g\,\text{Tan}[e+f\,x])^p\right)\Big/\left(f\,(1+p)\,(a+a\,\text{Sin}[e+f\,x])\right.$$

$$\left(\left(2+p\right)\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right],-\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right]+\right.$$

$$\left(-(2+p)\,\text{AppellF1}\left[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right],-\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right]+p\,\text{AppellF1}\left[\right.\right.$$

$$\left.\left.\left.2+p,1+p,2+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right],-\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right]\right)\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)$$

$$\left(\left(2\,p\,(2+p)\,\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right],-\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right]\right.\right.$$

$$\text{Sec}[e+f\,x]^2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^{-p}\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right)^{-2-p}\left(-1+\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]^2\right)^p\text{Tan}[e+f\,x]^{-1+p}\right)\Big/$$

$$\left((1+p)\,\left((2+p)\,\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f\,x)\right],-\text{Tan}\left[\frac{1}{2}(e+f\,x)\right]\right]+\right.\right.$$

$$\Big(-(2+p)\,\text{AppellF1}\Big[2+p,\ p,\ 3+p,\ 3+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]+$$

$$p\,\text{AppellF1}\Big[2+p,\ 1+p,\ 2+p,\ 3+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]\Big)$$

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big)+\Big(2\,p\,(2+p)\,\text{AppellF1}\Big[1+p,\ p,\ 2+p,\ 2+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],$$

$$-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\Big(-1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)^{-p}\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2$$

$$\Big(1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)^{-2-p}\,\Big(-1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)^{-1+p}\,\text{Tan}[e+f\,x]^p\Big)\Big/$$

$$\Big((1+p)\,\Big((2+p)\,\text{AppellF1}\Big[1+p,\ p,\ 2+p,\ 2+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]+$$

$$\Big(-(2+p)\,\text{AppellF1}\Big[2+p,\ p,\ 3+p,\ 3+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]+$$

$$p\,\text{AppellF1}\Big[2+p,\ 1+p,\ 2+p,\ 3+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]\Big)$$

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big)+\Big((-2-p)\,(2+p)\,\text{AppellF1}\Big[1+p,\ p,\ 2+p,\ 2+p,$$

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\Big(-1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)^{-p}$$

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\,\Big(1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)^{-3-p}\,\Big(-1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)^p\,\text{Tan}[e+f\,x]^p\Big)\Big/$$

$$\Big((1+p)\,\Big((2+p)\,\text{AppellF1}\Big[1+p,\ p,\ 2+p,\ 2+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]+$$

$$\Big(-(2+p)\,\text{AppellF1}\Big[2+p,\ p,\ 3+p,\ 3+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]+$$

$$p\,\text{AppellF1}\Big[2+p,\ 1+p,\ 2+p,\ 3+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]\Big)$$

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big)+\Big((2+p)\,\text{AppellF1}\Big[1+p,\ p,\ 2+p,\ 2+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],$$

$$-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\Big(-1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)^{-p}$$

$$\Big(1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)^{-2-p}\,\Big(-1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)^p\,\text{Tan}[e+f\,x]^p\Big)\Big/$$

$$\Big((1+p)\,\Big((2+p)\,\text{AppellF1}\Big[1+p,\ p,\ 2+p,\ 2+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]+$$

$$\Big(-(2+p)\,\text{AppellF1}\Big[2+p,\ p,\ 3+p,\ 3+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]+$$

$$p\,\text{AppellF1}\Big[2+p,\ 1+p,\ 2+p,\ 3+p,\ \text{Tan}\Big[$$

$$\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]\Big)\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big)-$$

$$\Big(p\,(2+p)\,\text{AppellF1}\Big[1+p,\ p,\ 2+p,\ 2+p,\ \text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big],\ -\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big]$$

$$\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\Big(-1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)^{-1-p}\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-2-p}\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^p \text{Tan}[e+f x]^p\Bigg)\Bigg/$$

$$\Bigg((1+p)\Bigg((2+p)\,\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]+$$

$$\Bigg(-(2+p)\,\text{AppellF1}\left[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]+$$

$$p\,\text{AppellF1}\Big[2+p,1+p,2+p,3+p,\text{Tan}\Big[$$

$$\frac{1}{2}(e+f x)\Big],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\Bigg)\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)+$$

$$\Bigg(2\,(2+p)\Bigg(-\frac{1}{2}(1+p)\,\text{AppellF1}\left[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2\,(2+p)}p\,(1+p)\,\text{AppellF1}\Big[2+p,1+p,2+p,3+p,$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-p}$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-2-p}\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^p \text{Tan}[e+f x]^p\Bigg)\Bigg/$$

$$\Bigg((1+p)\Bigg((2+p)\,\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]+$$

$$\Bigg(-(2+p)\,\text{AppellF1}\left[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]+$$

$$p\,\text{AppellF1}\Big[2+p,1+p,2+p,3+p,\text{Tan}\Big[$$

$$\frac{1}{2}(e+f x)\Big],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\Bigg)\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)-$$

$$\Bigg(2\,(2+p)\,\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-p}\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-2-p}$$

$$\Bigg(\frac{1}{2}\Bigg(-(2+p)\,\text{AppellF1}\left[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]+$$

$$p\,\text{AppellF1}\left[2+p,1+p,2+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\Bigg)$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+(2+p)\Bigg(-\frac{1}{2}(1+p)\,\text{AppellF1}\Big[2+p,p,3+p,3+p,\text{Tan}\Big[\frac{1}{2}(e+$$

$$f x)\Big],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2\,(2+p)}p\,(1+p)\,\text{AppellF1}\Big[2+$$

$$p,1+p,2+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)+$$

$$\Bigg(-(2+p)\Bigg(-\frac{1}{2}(2+p)\,\text{AppellF1}\Big[3+p,p,4+p,4+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2\,(3+p)}p\,(2+p)\,\text{AppellF1}\Big[3+p,$$

$$1+p,\ 3+p,\ 4+p,\ \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\ \mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)+$$

$$p\left(-\frac{1}{2(3+p)}(2+p)^2\,\mathrm{AppellF1}\left[3+p,\ 1+p,\ 3+p,\ 4+p,\ \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right],\right.\right.$$

$$\left.-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(3+p)}(1+p)(2+p)$$

$$\mathrm{HypergeometricPFQ}\left[\left\{\frac{3}{2}+\frac{p}{2},\ 2+p\right\},\ \left\{\frac{5}{2}+\frac{p}{2}\right\},\ \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\mathrm{Sec}\left[\right.$$

$$\left.\left.\left.\frac{1}{2}(e+f x)\right]^2\right)\right)\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^p\mathrm{Tan}[e+f x]^p\Bigg)\Bigg/$$

$$\left((1+p)\left((2+p)\,\mathrm{AppellF1}\left[1+p,\ p,\ 2+p,\ 2+p,\ \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right]+\right.\right.$$

$$\left(-(2+p)\,\mathrm{AppellF1}\left[2+p,\ p,\ 3+p,\ 3+p,\ \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right]+p\right.$$

$$\mathrm{AppellF1}\left[2+p,\ 1+p,\ 2+p,\ 3+p,\ \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$

$$\left.\left.\left.\left.-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right)\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)\right)\right)$$

Problem 127: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int\frac{(g\,\mathrm{Tan}[e+f x])^p}{(a+a\,\mathrm{Sin}[e+f x])^2}\,dx$$

Optimal (type 5, 138 leaves, 10 steps):

$$\frac{(g\,\mathrm{Tan}[e+f x])^{1+p}}{a^2 f g(1+p)}-\frac{1}{a^2 f g^2(2+p)}$$

$$2\left(\mathrm{Cos}[e+f x]^2\right)^{\frac{5+p}{2}}\mathrm{Hypergeometric2F1}\left[\frac{2+p}{2},\frac{5+p}{2},\frac{4+p}{2},\mathrm{Sin}[e+f x]^2\right]$$

$$\mathrm{Sec}[e+f x]^3\,(g\,\mathrm{Tan}[e+f x])^{2+p}+\frac{2\,(g\,\mathrm{Tan}[e+f x])^{3+p}}{a^2 f g^3(3+p)}$$

Result (type 6, 7283 leaves):

$$\left(2^{1+p}(2+p)\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-p}\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right.$$

$$\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-4-p}\left(-\frac{\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^p$$

$$\left(\left(\mathrm{AppellF1}\left[1+p,\ p,\ 2+p,\ 2+p,\ \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right.\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^{2}\Big) \Big/$$
$$\Big(\left(2+p\right) \text{AppellF1}\left[1+p, p, 2+p, 2+p, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right] -$$
$$\left(2+p\right) \text{AppellF1}\left[2+p, p, 3+p, 3+p, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right] + p\, \text{AppellF1}\left[2+p, 1+p, 2+p, 3+p,\right.$$
$$\left.\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right] \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\Big) -$$
$$\Big(2\, \text{AppellF1}\left[1+p, p, 3+p, 2+p, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right]$$
$$\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\Big) \Big/$$
$$\Big(\left(2+p\right) \text{AppellF1}\left[1+p, p, 3+p, 2+p, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right] -$$
$$\left(3+p\right) \text{AppellF1}\left[2+p, p, 4+p, 3+p, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right] + p\, \text{AppellF1}\left[2+p, 1+p, 3+p, 3+p,\right.$$
$$\left.\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right] \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\Big) +$$
$$\Big(2\, \text{AppellF1}\left[1+p, p, 4+p, 2+p, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right]\Big) \Big/$$
$$\Big(\left(2+p\right) \text{AppellF1}\left[1+p, p, 4+p, 2+p, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right] - (4+p)$$
$$\text{AppellF1}\left[2+p, p, 5+p, 3+p, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right] \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right] +$$
$$p\, \text{AppellF1}\left[2+p, 1+p, 4+p, 3+p, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\Big)\Big) \left(g\, \text{Tan}[e+f x]\right)^{p}\Big) \Big/$$
$$\Big(f\left(1+p\right)\left(a+a\, \text{Sin}[e+f x]\right)^{2}\Big(\frac{1}{1+p} 2^{1+p} p\left(2+p\right) \text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^{-p}$$
$$\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^{-4-p}\left(-\frac{\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}}\right)^{p}$$
$$\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\right)^{-1+p}\Big(\Big(\text{AppellF1}\left[1+p, p, 2+p, 2+p,\right.$$
$$\left.\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right]\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)^{2}\Big) \Big/$$
$$\Big(\left(2+p\right) \text{AppellF1}\left[1+p, p, 2+p, 2+p, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right], -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right] -$$

$$(2+p)\,\text{AppellF1}\left[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]+p\,\text{AppellF1}\left[2+p,1+p,2+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)-\left(2\,\text{AppellF1}\left[1+p,p,3+p,\right.\right.$$
$$\left.\left.2+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\Big/$$
$$\left(\left(2+p\right)\text{AppellF1}\left[1+p,p,3+p,2+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]-\right.$$
$$(3+p)\,\text{AppellF1}\left[2+p,p,4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]+p\,\text{AppellF1}\left[2+p,1+p,3+p,3+p,\right.$$
$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+$$
$$\left(2\,\text{AppellF1}\left[1+p,p,4+p,2+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]\right)\Big/$$
$$\left(\left(2+p\right)\text{AppellF1}\left[1+p,p,4+p,2+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]-\right.$$
$$(4+p)\,\text{AppellF1}\left[2+p,p,5+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]+p\,\text{AppellF1}\left[2+p,1+p,4+p,3+p,\right.$$
$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)+$$
$$\frac{1}{1+p}2^p(-4-p)(2+p)\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^{-p}\text{Tan}\left[\frac{1}{2}(e+fx)\right]$$
$$\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^{-5-p}\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^p$$
$$\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^p\left(\left(\text{AppellF1}\left[1+p,p,2+p,2+p,\right.\right.\right.$$
$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^2\right)\Big/$$
$$\left(\left(2+p\right)\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]-\right.$$
$$(2+p)\,\text{AppellF1}\left[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]+p\,\text{AppellF1}\left[2+p,1+p,2+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)-\left(2\,\text{AppellF1}\left[1+p,p,3+p,\right.\right.$$
$$\left.\left.2+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\Big/$$

$$\left(\left(2+p\right)\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]-\right.$$

$$\left(3+p\right)\text{AppellF1}\left[2+p,\,p,\,4+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,3+p,\,3+p,\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)+$$

$$\left(2\,\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\right)\Big/$$

$$\left(\left(2+p\right)\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]-\right.$$

$$\left(4+p\right)\text{AppellF1}\left[2+p,\,p,\,5+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,4+p,\,3+p,\right.$$

$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)\right)+$$

$$\frac{1}{1+p}2^{p}\left(2+p\right)\text{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^{2}\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^{-p}\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^{-4-p}$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^{2}}\right)^{p}\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^{2}\right)^{p}$$

$$\left(\left(\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\right.\right.$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^{2}\right)\Big/$$

$$\left(\left(2+p\right)\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]-\right.$$

$$\left(2+p\right)\text{AppellF1}\left[2+p,\,p,\,3+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,2+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\right.$$

$$\left.\left.-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)-\left(2\,\text{AppellF1}\left[1+p,\,p,\,3+p,\right.\right.$$

$$\left.\left.\left.2+p,\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)\right)\right)\Big/$$

$$\left(\left(2+p\right)\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]-\right.$$

$$\left(3+p\right)\text{AppellF1}\left[2+p,\,p,\,4+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,3+p,\,3+p,\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)+$$

$$\left(2\,\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-\right.$$
$$(4+p)\,\text{AppellF1}\left[2+p,\,p,\,5+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,4+p,\,3+p,\right.$$
$$\left.\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Bigg)-$$
$$\frac{1}{1+p}\,2^p\,p\,(2+p)\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^{-1-p}\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]$$
$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^{-4-p}$$
$$\left(-\frac{\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^p$$
$$\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^p$$
$$\left(\left(\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\right.\right.$$
$$\left.\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-\right.$$
$$(2+p)\,\text{AppellF1}\left[2+p,\,p,\,3+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,2+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)-\left(2\,\text{AppellF1}\left[1+p,\,p,\,3+p,\right.\right.$$
$$\left.\left.2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-\right.$$
$$(3+p)\,\text{AppellF1}\left[2+p,\,p,\,4+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,3+p,\,3+p,\right.$$
$$\left.\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)+$$
$$\left(2\,\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-\right.$$

$$(4+p)\,\text{AppellF1}\left[2+p,p,5+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,1+p,4+p,3+p,\right.$$
$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)+$$
$$\frac{1}{1+p}2^{1+p}(2+p)\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-p}\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-4-p}$$
$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p$$
$$\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^p$$
$$\left(\left(\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right.\right.$$
$$\left.\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$
$$(2+p)\,\text{AppellF1}\left[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,1+p,2+p,3+p,\right.$$
$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$
$$\left(\left(-\frac{1}{2}(1+p)\,\text{AppellF1}\left[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right.\right.$$
$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(2+p)}p(1+p)\,\text{AppellF1}\left[2+p,1+p,2+p,3+p,\text{Tan}\left[\right.\right.$$
$$\left.\left.\left.\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\Big)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$
$$(2+p)\,\text{AppellF1}\left[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,1+p,2+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)-\left(\text{AppellF1}\left[1+p,p,3+p,\right.\right.$$
$$\left.\left.2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,p,3+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$
$$(3+p)\,\text{AppellF1}\left[2+p,p,4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,1+p,3+p,3+p,\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)-$$

$$\left(2\left(-\frac{1}{2(2+p)}(1+p)(3+p)\,\text{AppellF1}\left[2+p,p,4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(2+p)}$$

$$p(1+p)\,\text{AppellF1}\left[2+p,1+p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$

$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/$$

$$\left((2+p)\,\text{AppellF1}\left[1+p,p,3+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$

$$(3+p)\,\text{AppellF1}\left[2+p,p,4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,1+p,3+p,3+p,\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$

$$\left(2\left(-\frac{1}{2(2+p)}(1+p)(4+p)\,\text{AppellF1}\left[2+p,p,5+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(2+p)}p(1+p)\,\text{AppellF1}\left[2+p,1+p,\right.$$

$$\left.\left.\left.4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\Big/$$

$$\left((2+p)\,\text{AppellF1}\left[1+p,p,4+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$

$$(4+p)\,\text{AppellF1}\left[2+p,p,5+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,1+p,4+p,3+p,\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$

$$\left(2\,\text{AppellF1}\left[1+p,p,3+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\left(-\frac{1}{2}(3+p)\,\text{AppellF1}\left[2+p,p,4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2}p\,\text{AppellF1}\left[2+p,1+p,\right.$$

$$\left.3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+$$

$$(2+p)\left(-\frac{1}{2(2+p)}(1+p)(3+p)\,\text{AppellF1}\left[2+p,p,4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+\frac{1}{2(2+p)}p(1+p)\,\text{AppellF1}\Big[2+p,$$

$$1+p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)-$$

$$(3+p)\left(-\frac{1}{2(3+p)}(2+p)(4+p)\,\text{AppellF1}\Big[3+p,p,5+p,4+p,\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+\frac{1}{2(3+p)}p(2+p)$$

$$\text{AppellF1}\Big[3+p,1+p,4+p,4+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]$$

$$\left.\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]+p\left(-\frac{1}{2}(2+p)\,\text{AppellF1}\Big[3+p,1+p,\right.$$

$$4+p,4+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+$$

$$\frac{1}{2(3+p)}(1+p)(2+p)\,\text{AppellF1}\Big[3+p,2+p,3+p,4+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],$$

$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\Bigg/$$

$$\left((2+p)\,\text{AppellF1}\Big[1+p,p,3+p,2+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]-\right.$$

$$(3+p)\,\text{AppellF1}\Big[2+p,p,4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]+p\,\text{AppellF1}\Big[2+p,1+p,3+p,$$

$$\left.3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^2-$$

$$\left(2\,\text{AppellF1}\Big[1+p,p,4+p,2+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\right.$$

$$\left(-\frac{1}{2}(4+p)\,\text{AppellF1}\Big[2+p,p,5+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+\frac{1}{2}p\,\text{AppellF1}\Big[2+p,1+p,$$

$$4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+$$

$$(2+p)\left(-\frac{1}{2(2+p)}(1+p)(4+p)\,\text{AppellF1}\Big[2+p,p,5+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+\frac{1}{2(2+p)}p(1+p)\,\text{AppellF1}\Big[2+p,$$

$$\left.1+p,4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\right)-$$

$$(4+p)\left(-\frac{1}{2(3+p)}(2+p)(5+p)\,\text{AppellF1}\Big[3+p,p,6+p,4+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+\frac{1}{2(3+p)}p\,(2+p)\,\text{AppellF1}\Big[3+p,$$

$$1+p,5+p,4+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]+p\left(-\frac{1}{2(3+p)}(2+p)\,(4+p)\,\text{AppellF1}\Big[3+p,1+p,5+p,\right.$$

$$4+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+\frac{1}{2(3+p)}$$

$$(1+p)\,(2+p)\,\text{AppellF1}\Big[3+p,2+p,4+p,4+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],$$

$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\Big/$$

$$\Bigg(\Bigg((2+p)\,\text{AppellF1}\Big[1+p,p,4+p,2+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]-$$

$$(4+p)\,\text{AppellF1}\Big[2+p,p,5+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]+p\,\text{AppellF1}\Big[2+p,1+p,4+p,$$

$$3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Bigg)^2-$$

$$\Bigg(\text{AppellF1}\Big[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)^2\left(-\frac{1}{2}(2+p)\,\text{AppellF1}\Big[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+\frac{1}{2}p\,\text{AppellF1}\Big[2+p,1+p,$$

$$2+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+$$

$$(2+p)\left(-\frac{1}{2}(1+p)\,\text{AppellF1}\Big[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+\frac{1}{2(2+p)}p\,(1+p)\,\text{AppellF1}\Big[2+p,$$

$$\left.1+p,2+p,3+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\right)-$$

$$(2+p)\left(-\frac{1}{2}(2+p)\,\text{AppellF1}\Big[3+p,p,4+p,4+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2+\frac{1}{2(3+p)}p\,(2+p)\,\text{AppellF1}\Big[3+p,$$

$$\left.1+p,3+p,4+p,\text{Tan}\left[\frac{1}{2}(e+fx)\right],-\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\right)$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]+p\left(-\frac{1}{2(3+p)}(2+p)^2\,\text{AppellF1}\Big[3+p,1+p,3+p,\right.$$

$$4+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\ \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+$$

$$\frac{1}{2(3+p)}(1+p)(2+p)\ \text{HypergeometricPFQ}\left[\left\{\frac{3}{2}+\frac{p}{2},\ 2+p\right\},\ \left\{\frac{5}{2}+\frac{p}{2}\right\},\right.$$

$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/$$

$$\left((2+p)\ \text{AppellF1}\left[1+p,\ p,\ 2+p,\ 2+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$

$$(2+p)\ \text{AppellF1}\left[2+p,\ p,\ 3+p,\ 3+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\ \text{AppellF1}\left[2+p,\ 1+p,\ 2+p,\right.$$

$$\left.\left.3+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\Big)+$$

$$\frac{1}{1+p}2^{1+p}p(2+p)\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-p}\text{Tan}\left[\frac{1}{2}(e+f x)\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-4-p}$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-1+p}$$

$$\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^p$$

$$\left(\left(\text{AppellF1}\left[1+p,\ p,\ 2+p,\ 2+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right.\right.$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)\Big/$$

$$\left((2+p)\ \text{AppellF1}\left[1+p,\ p,\ 2+p,\ 2+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$

$$(2+p)\ \text{AppellF1}\left[2+p,\ p,\ 3+p,\ 3+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\ \text{AppellF1}\left[2+p,\ 1+p,\ 2+p,\ 3+p,\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)-$$

$$\left(2\ \text{AppellF1}\left[1+p,\ p,\ 3+p,\ 2+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right.$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/$$

$$\left((2+p)\ \text{AppellF1}\left[1+p,\ p,\ 3+p,\ 2+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$

$$(3+p)\ \text{AppellF1}\left[2+p,\ p,\ 4+p,\ 3+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\ \text{AppellF1}\left[2+p,\ 1+p,\ 3+p,\ 3+p,\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right] \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right) +$$

$$\left(2\,\text{AppellF1}\left[1+p, p, 4+p, 2+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right) \Big/$$

$$\left((2+p)\,\text{AppellF1}\left[1+p, p, 4+p, 2+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right] -\right.$$

$$(4+p)\,\text{AppellF1}\left[2+p, p, 5+p, 3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right] + p\,\text{AppellF1}\left[2+p, 1+p, 4+p, 3+p,\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right] \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)$$

$$\left.\left.\left.\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2} - \frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}\right)\right)\right)\right)$$

Problem 128: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \frac{(g\,\text{Tan}[e+f x])^p}{(a+a\,\text{Sin}[e+f x])^3}\,dx$$

Optimal (type 5, 248 leaves, 13 steps):

$$\frac{(g\,\text{Tan}[e+f x])^{1+p}}{a^3 f g (1+p)} - \frac{1}{a^3 f g^2 (2+p)}$$

$$3\left(\text{Cos}[e+f x]^2\right)^{\frac{7+p}{2}} \text{Hypergeometric2F1}\left[\frac{2+p}{2}, \frac{7+p}{2}, \frac{4+p}{2}, \text{Sin}[e+f x]^2\right]$$

$$\text{Sec}[e+f x]^5 (g\,\text{Tan}[e+f x])^{2+p} + \frac{5 (g\,\text{Tan}[e+f x])^{3+p}}{a^3 f g^3 (3+p)} - \frac{1}{a^3 f g^4 (4+p)}$$

$$\left(\text{Cos}[e+f x]^2\right)^{\frac{7+p}{2}} \text{Hypergeometric2F1}\left[\frac{4+p}{2}, \frac{7+p}{2}, \frac{6+p}{2}, \text{Sin}[e+f x]^2\right]$$

$$\text{Sec}[e+f x]^3 (g\,\text{Tan}[e+f x])^{4+p} + \frac{4 (g\,\text{Tan}[e+f x])^{5+p}}{a^3 f g^5 (5+p)}$$

Result (type 6, 11 802 leaves):

$$\left(2^{1+p} (2+p) \left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-p} \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-6-p} \left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p \left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^p$$

$$\left(\left(\text{AppellF1}\left[1+p, p, 2+p, 2+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right.\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^4\Big)\Big/$$

$$\Big((2+p)\,\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(2+p)\,\text{AppellF1}\left[2+p,\,p,\,3+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\Big[2+p,\,1+p,\,2+p,\,3+p,$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)-$$

$$\Big(4\,\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^3\Big)\Big/$$

$$\Big((2+p)\,\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(3+p)\,\text{AppellF1}\left[2+p,\,p,\,4+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\Big[2+p,\,1+p,\,3+p,\,3+p,$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)+$$

$$\Big(8\,\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\Big)\Big/$$

$$\Big((2+p)\,\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(4+p)\,\text{AppellF1}\left[2+p,\,p,\,5+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\Big[2+p,\,1+p,\,4+p,\,3+p,$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)-$$

$$\Big(8\,\text{AppellF1}\left[1+p,\,p,\,5+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Big)\Big/$$

$$\Big((2+p)\,\text{AppellF1}\left[1+p,\,p,\,5+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(5+p)\,\text{AppellF1}\left[2+p,\,p,\,6+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\Big[2+p,\,1+p,\,5+p,\,3+p,$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)+$$

$$\Big(4\,\text{AppellF1}\big[1+p,\,p,\,6+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],\,-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]\Big)\Big/$$

$$\Big(\big(2+p\big)\,\text{AppellF1}\big[1+p,\,p,\,6+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],\,-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]-(6+p)$$

$$\text{AppellF1}\big[2+p,\,p,\,7+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],\,-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]+$$

$$p\,\text{AppellF1}\big[2+p,\,1+p,\,6+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],\,-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]$$

$$\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\Big)\Big)\,\big(g\,\text{Tan}[e+f\,x]\big)^{p}\Big)\Big/$$

$$\Big(f\,(1+p)\,\big(a+a\,\text{Sin}[e+f\,x]\big)^{3}\,\Big(\frac{1}{1+p}\,2^{1+p}\,p\,(2+p)\,\text{Sec}\big[\tfrac{1}{2}\,(e+f\,x)\big]^{2}$$

$$\Big(-1+\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\Big)^{-p}\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]^{2}\,\Big(1+\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\Big)^{-6-p}$$

$$\left(-\frac{\text{Tan}\big[\frac{1}{2}\,(e+f\,x)\big]}{-1+\text{Tan}\big[\frac{1}{2}\,(e+f\,x)\big]^{2}}\right)^{p}\,\Big(-1+\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]^{2}\Big)^{-1+p}$$

$$\Big(\Big(\text{AppellF1}\big[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],\,-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]$$

$$\Big(1+\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\Big)^{4}\Big)\Big/\Big(\big(2+p\big)\,\text{AppellF1}\big[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],$$

$$-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]-\big(2+p\big)\,\text{AppellF1}\big[2+p,\,p,\,3+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],$$

$$-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]+p\,\text{AppellF1}\big[2+p,\,1+p,\,2+p,\,3+p,$$

$$\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],\,-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\Big)-\Big(4\,\text{AppellF1}\big[1+p,\,p,$$

$$3+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],\,-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]\,\Big(1+\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\Big)^{3}\Big)\Big/$$

$$\Big(\big(2+p\big)\,\text{AppellF1}\big[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],\,-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]-$$

$$\big(3+p\big)\,\text{AppellF1}\big[2+p,\,p,\,4+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],\,-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]$$

$$\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]+p\,\text{AppellF1}\big[2+p,\,1+p,\,3+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],$$

$$-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\Big)+\Big(8\,\text{AppellF1}\big[1+p,\,p,\,4+p,$$

$$2+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],\,-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]\,\Big(1+\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\Big)^{2}\Big)\Big/$$

$$\Big(\big(2+p\big)\,\text{AppellF1}\big[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],\,-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]-$$

$$(4+p)\,\text{AppellF1}\big[2+p,\,p,\,5+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big],\,-\text{Tan}\big[\tfrac{1}{2}\,(e+f\,x)\big]\big]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,1+p,4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)-\left(8\,\text{AppellF1}\left[1+p,p,5+p,\right.\right.$$
$$\left.\left.2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,p,5+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$
$$(5+p)\,\text{AppellF1}\left[2+p,p,6+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,1+p,5+p,3+p,\right.$$
$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$
$$\left(4\,\text{AppellF1}\left[1+p,p,6+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,p,6+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$
$$(6+p)\,\text{AppellF1}\left[2+p,p,7+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,1+p,6+p,3+p,\right.$$
$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)+$$
$$\frac{1}{1+p}2^p(-6-p)(2+p)\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-p}$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-7-p}$$
$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^p$$
$$\left(\left(\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right.\right.$$
$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^4\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,p,2+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$
$$(2+p)\,\text{AppellF1}\left[2+p,p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,1+p,2+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)-\left(4\,\text{AppellF1}\left[1+p,p,3+p,\right.\right.$$
$$\left.\left.2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3\right)\Big/$$

$$\Big((2+p)\,\text{AppellF1}\big[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]-(3+p)\,\text{AppellF1}\big[2+p,\,p,\,4+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]+p\,\text{AppellF1}\big[2+p,\,1+p,\,3+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\Big)+\Big(8\,\text{AppellF1}\big[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]\,\big(1+\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big)^2\Big)\Big/$$

$$\Big((2+p)\,\text{AppellF1}\big[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]-(4+p)\,\text{AppellF1}\big[2+p,\,p,\,5+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]+p\,\text{AppellF1}\big[2+p,\,1+p,\,4+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\Big)-\Big(8\,\text{AppellF1}\big[1+p,\,p,\,5+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]\,\big(1+\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big)\Big)\Big/$$

$$\Big((2+p)\,\text{AppellF1}\big[1+p,\,p,\,5+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]-(5+p)\,\text{AppellF1}\big[2+p,\,p,\,6+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]+p\,\text{AppellF1}\big[2+p,\,1+p,\,5+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\Big)+$$

$$\Big(4\,\text{AppellF1}\big[1+p,\,p,\,6+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]\Big)\Big/\Big((2+p)\,\text{AppellF1}\big[1+p,\,p,\,6+p,\,2+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]-(6+p)\,\text{AppellF1}\big[2+p,\,p,\,7+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]+p\,\text{AppellF1}\big[2+p,\,1+p,\,6+p,\,3+p,\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big],\,-\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big]\,\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\Big)\Big)+$$

$$\frac{1}{1+p}\,2^p\,(2+p)\,\text{Sec}\big[\tfrac{1}{2}(e+f x)\big]^2\,\big(-1+\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big)^{-p}\,\big(1+\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]\big)^{-6-p}\left(-\frac{\text{Tan}\big[\frac{1}{2}(e+f x)\big]}{-1+\text{Tan}\big[\frac{1}{2}(e+f x)\big]^2}\right)^p\,\big(-1+\text{Tan}\big[\tfrac{1}{2}(e+f x)\big]^2\big)^p$$

$$\left(\left(\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\right.\right.$$
$$\left.\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^4\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-\right.$$
$$(2+p)\,\text{AppellF1}\left[2+p,\,p,\,3+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,2+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)-\left(4\,\text{AppellF1}\left[1+p,\,p,\,3+p,\right.\right.$$
$$\left.\left.2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^3\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-\right.$$
$$(3+p)\,\text{AppellF1}\left[2+p,\,p,\,4+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,3+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)+\left(8\,\text{AppellF1}\left[1+p,\,p,\,4+p,\right.\right.$$
$$\left.\left.2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-\right.$$
$$(4+p)\,\text{AppellF1}\left[2+p,\,p,\,5+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,4+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)-\left(8\,\text{AppellF1}\left[1+p,\,p,\,5+p,\right.\right.$$
$$\left.\left.2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,5+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-\right.$$
$$(5+p)\,\text{AppellF1}\left[2+p,\,p,\,6+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$
$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,5+p,\,3+p,\right.$$
$$\left.\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)+$$
$$\left(4\,\text{AppellF1}\left[1+p,\,p,\,6+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,6+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-\right.$$

$$(6+p)\,\text{AppellF1}\left[2+p,\,p,\,7+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,6+p,\,3+p,\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)\Big)-$$

$$\frac{1}{1+p}\,2^p\,p\,(2+p)\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^{-1-p}\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^{-6-p}$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^p$$

$$\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^p$$

$$\Bigg(\Bigg(\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^4\Bigg)\Big/$$

$$\Bigg((2+p)\,\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(2+p)\,\text{AppellF1}\left[2+p,\,p,\,3+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,2+p,\,3+p,\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Bigg)-$$

$$\Bigg(4\,\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^3\Bigg)\Big/$$

$$\Bigg((2+p)\,\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(3+p)\,\text{AppellF1}\left[2+p,\,p,\,4+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,3+p,\,3+p,\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Bigg)+$$

$$\Bigg(8\,\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\Bigg)\Big/$$

$$\Bigg((2+p)\,\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(4+p)\,\text{AppellF1}\left[2+p,\,p,\,5+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,4+p,\,3+p,\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)-$$

$$\left(8\,\text{AppellF1}\left[1+p,\,p,\,5+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\right.$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\Big/$$

$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,5+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-\right.$$

$$(5+p)\,\text{AppellF1}\left[2+p,\,p,\,6+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,5+p,\,3+p,\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)+$$

$$\left(4\,\text{AppellF1}\left[1+p,\,p,\,6+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\right)\Big/$$

$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,6+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-\right.$$

$$(6+p)\,\text{AppellF1}\left[2+p,\,p,\,7+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,6+p,\,3+p,\right.$$

$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)+$$

$$\frac{1}{1+p}\,2^{1+p}\,(2+p)\,\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^{-p}\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^{-6-p}$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{p}$$

$$\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{p}$$

$$\left(\left(2\,\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\right.\right.$$

$$\left.\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^3\right)\Big/$$

$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-\right.$$

$$(2+p)\,\text{AppellF1}\left[2+p,\,p,\,3+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,2+p,\,3+p,\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)+$$

$$\Bigg(\Bigg(-\frac{1}{2}\,(1+p)\,\text{AppellF1}\left[2+p,\,p,\,3+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2+\frac{1}{2\,(2+p)}p\,(1+p)\,\text{AppellF1}\Big[2+p,\,1+p,\,2+p,\,3+p,\,\text{Tan}\Big[$$

$$\frac{1}{2}\,(e+f\,x)\Big],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^4\Bigg)\Big/$$

$$\Big((2+p)\,\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(2+p)\,\text{AppellF1}\left[2+p,\,p,\,3+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,2+p,\,3+p,\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)-$$

$$\Bigg(6\,\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\Bigg)\Big/$$

$$\Big((2+p)\,\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(3+p)\,\text{AppellF1}\left[2+p,\,p,\,4+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,3+p,\,3+p,\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)-$$

$$\Bigg(4\,\Bigg(-\frac{1}{2\,(2+p)}(1+p)\,(3+p)\,\text{AppellF1}\left[2+p,\,p,\,4+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2+\frac{1}{2\,(2+p)}$$

$$p\,(1+p)\,\text{AppellF1}\left[2+p,\,1+p,\,3+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^3\Bigg)\Big/$$

$$\Big((2+p)\,\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(3+p)\,\text{AppellF1}\left[2+p,\,p,\,4+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,3+p,\,3+p,\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right] \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big) +$$

$$\Big(8\,\text{AppellF1}\left[1+p, p, 4+p, 2+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big) \Big/$$

$$\Big((2+p)\,\text{AppellF1}\left[1+p, p, 4+p, 2+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right] -$$

$$(4+p)\,\text{AppellF1}\left[2+p, p, 5+p, 3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right] + p\,\text{AppellF1}\Big[2+p, 1+p, 4+p, 3+p,$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big) +$$

$$\Big(8\,\Big(-\frac{1}{2(2+p)}(1+p)\,(4+p)\,\text{AppellF1}\Big[2+p, p, 5+p, 3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right],$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 + \frac{1}{2(2+p)}$$

$$p\,(1+p)\,\text{AppellF1}\Big[2+p, 1+p, 4+p, 3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right],$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\Big) \left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\Big) \Big/$$

$$\Big((2+p)\,\text{AppellF1}\left[1+p, p, 4+p, 2+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right] -$$

$$(4+p)\,\text{AppellF1}\left[2+p, p, 5+p, 3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right] + p\,\text{AppellF1}\Big[2+p, 1+p, 4+p, 3+p,$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big) -$$

$$\Big(4\,\text{AppellF1}\left[1+p, p, 5+p, 2+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\Big) \Big/$$

$$\Big((2+p)\,\text{AppellF1}\left[1+p, p, 5+p, 2+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right] -$$

$$(5+p)\,\text{AppellF1}\left[2+p, p, 6+p, 3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right] + p\,\text{AppellF1}\Big[2+p, 1+p, 5+p, 3+p,$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big) -$$

$$\Big(8\,\Big(-\frac{1}{2(2+p)}(1+p)\,(5+p)\,\text{AppellF1}\Big[2+p, p, 6+p, 3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right],$$

$$
\begin{aligned}
&-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(2+p)} \\
&p\,(1+p)\,\text{AppellF1}\Big[2+p,1+p,5+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right], \\
&-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\Big)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big)\Big/ \\
&\Big((2+p)\,\text{AppellF1}\Big[1+p,p,5+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]- \\
&(5+p)\,\text{AppellF1}\Big[2+p,p,6+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \\
&\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\Big[2+p,1+p,5+p,3+p, \\
&\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big)+ \\
&\Big(4\,\Big(-\frac{1}{2(2+p)}(1+p)\,(6+p)\,\text{AppellF1}\Big[2+p,p,7+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right], \\
&-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(2+p)}p\,(1+p)\,\text{AppellF1}\Big[2+p,1+p, \\
&6+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)\Big/ \\
&\Big((2+p)\,\text{AppellF1}\Big[1+p,p,6+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]- \\
&(6+p)\,\text{AppellF1}\Big[2+p,p,7+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \\
&\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\Big[2+p,1+p,6+p,3+p, \\
&\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big)+ \\
&\Big(4\,\text{AppellF1}\Big[1+p,p,3+p,2+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \\
&\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^3\Big(-\frac{1}{2}(3+p)\,\text{AppellF1}\Big[2+p,p,4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right], \\
&-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2}p\,\text{AppellF1}\Big[2+p,1+p, \\
&3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+ \\
&(2+p)\,\Big(-\frac{1}{2(2+p)}(1+p)\,(3+p)\,\text{AppellF1}\Big[2+p,p,4+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right], \\
&-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(2+p)}p\,(1+p)\,\text{AppellF1}\Big[2+p, \\
&1+p,3+p,3+p,\text{Tan}\left[\frac{1}{2}(e+f x)\right],-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\Big)- \\
&(3+p)\,\Big(-\frac{1}{2(3+p)}(2+p)\,(4+p)\,\text{AppellF1}\Big[3+p,p,5+p,4+p,
\end{aligned}
$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(3+p)} p (2+p)$$

$$\text{AppellF1}\left[3+p, 1+p, 4+p, 4+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\Bigg) \text{Tan}\left[\frac{1}{2}(e+f x)\right] + p \left(-\frac{1}{2}(2+p) \text{AppellF1}\Big[3+p, 1+p,\right.$$

$$4+p, 4+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+$$

$$\frac{1}{2(3+p)}(1+p)(2+p) \text{AppellF1}\Big[3+p, 2+p, 3+p, 4+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right],$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)\Bigg) \Big/$$

$$\Bigg(\Big((2+p) \text{AppellF1}\left[1+p, p, 3+p, 2+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right] -$$

$$(3+p) \text{AppellF1}\Big[2+p, p, 4+p, 3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right],$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Tan}\left[\frac{1}{2}(e+f x)\right] + p \text{AppellF1}\Big[2+p, 1+p, 3+p,$$

$$3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big)^2 -$$

$$\Bigg(8 \text{AppellF1}\left[1+p, p, 4+p, 2+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2 \left(-\frac{1}{2}(4+p) \text{AppellF1}\Big[2+p, p, 5+p, 3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 + \frac{1}{2} p \text{AppellF1}\Big[2+p, 1+p,$$

$$4+p, 3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 +$$

$$(2+p) \left(-\frac{1}{2(2+p)}(1+p)(4+p) \text{AppellF1}\Big[2+p, p, 5+p, 3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 + \frac{1}{2(2+p)} p (1+p) \text{AppellF1}\Big[2+p,$$

$$\left.1+p, 4+p, 3+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right) -$$

$$(4+p) \left(-\frac{1}{2(3+p)}(2+p)(5+p) \text{AppellF1}\Big[3+p, p, 6+p, 4+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 + \frac{1}{2(3+p)} p (2+p) \text{AppellF1}\Big[3+p,$$

$$\left.1+p, 5+p, 4+p, \text{Tan}\left[\frac{1}{2}(e+f x)\right], -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right] + p \left(-\frac{1}{2(3+p)}(2+p)(4+p) \text{AppellF1}\Big[3+p, 1+p, 5+p,\right.$$

$$4+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\ -\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\ \mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2+\frac{1}{2\left(3+p\right)}$$

$$\left(1+p\right)\ \left(2+p\right)\ \mathrm{AppellF1}\left[3+p,\ 2+p,\ 4+p,\ 4+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\right.$$

$$\left.\left.\left.-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\ \mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)\right)\Big/$$

$$\left(\left(2+p\right)\ \mathrm{AppellF1}\left[1+p,\ p,\ 4+p,\ 2+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\ -\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]-\right.$$

$$(4+p)\ \mathrm{AppellF1}\left[2+p,\ p,\ 5+p,\ 3+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\right.$$

$$\left.-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+p\,\mathrm{AppellF1}\left[2+p,\ 1+p,\ 4+p,\right.$$

$$\left.\left.3+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\ -\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)^2+$$

$$\left(8\,\mathrm{AppellF1}\left[1+p,\ p,\ 5+p,\ 2+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\ -\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\right.$$

$$\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)\ \left(-\frac{1}{2}\ (5+p)\ \mathrm{AppellF1}\left[2+p,\ p,\ 6+p,\ 3+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\right.\right.$$

$$-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\ \mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2+\frac{1}{2}\,p\,\mathrm{AppellF1}\left[2+p,\ 1+p,\right.$$

$$\left.5+p,\ 3+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\ -\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\ \mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2+$$

$$\left(2+p\right)\ \left(-\frac{1}{2\left(2+p\right)}\left(1+p\right)\ (5+p)\ \mathrm{AppellF1}\left[2+p,\ p,\ 6+p,\ 3+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\right.\right.$$

$$-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\ \mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2+\frac{1}{2\left(2+p\right)}p\ \left(1+p\right)\ \mathrm{AppellF1}\left[2+p,\right.$$

$$\left.\left.1+p,\ 5+p,\ 3+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\ -\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\ \mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)-$$

$$(5+p)\ \left(-\frac{1}{2\left(3+p\right)}\left(2+p\right)\ (6+p)\ \mathrm{AppellF1}\left[3+p,\ p,\ 7+p,\ 4+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\right.\right.$$

$$-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\ \mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2+\frac{1}{2\left(3+p\right)}p\ \left(2+p\right)\ \mathrm{AppellF1}\left[3+p,\right.$$

$$\left.\left.1+p,\ 6+p,\ 4+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\ -\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\ \mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)$$

$$\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+p\ \left(-\frac{1}{2\left(3+p\right)}\left(2+p\right)\ (5+p)\ \mathrm{AppellF1}\left[3+p,\ 1+p,\ 6+p,\right.\right.$$

$$4+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\ -\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\ \mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2+\frac{1}{2\left(3+p\right)}$$

$$\left(1+p\right)\ \left(2+p\right)\ \mathrm{AppellF1}\left[3+p,\ 2+p,\ 5+p,\ 4+p,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right],\right.$$

$$\left.\left.\left.-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right]\ \mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)\right)\Big/$$

$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,5+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$
$$(5+p)\,\text{AppellF1}\left[2+p,\,p,\,6+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,5+p,\right.$$
$$\left.\left.3+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2-$$
$$\left(4\,\text{AppellF1}\left[1+p,\,p,\,6+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right.$$
$$\left(-\frac{1}{2}(6+p)\,\text{AppellF1}\left[2+p,\,p,\,7+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2}p\,\text{AppellF1}\left[2+p,\,1+p,\right.$$
$$\left.6+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+$$
$$(2+p)\left(-\frac{1}{2(2+p)}(1+p)(6+p)\,\text{AppellF1}\left[2+p,\,p,\,7+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(2+p)}p\,(1+p)\,\text{AppellF1}\left[2+p,\right.$$
$$\left.\left.1+p,\,6+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)-$$
$$(6+p)\left(-\frac{1}{2(3+p)}(2+p)(7+p)\,\text{AppellF1}\left[3+p,\,p,\,8+p,\,4+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(3+p)}p\,(2+p)\,\text{AppellF1}\left[3+p,\right.$$
$$\left.\left.1+p,\,7+p,\,4+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\left(-\frac{1}{2(3+p)}(2+p)(6+p)\,\text{AppellF1}\left[3+p,\,1+p,\,7+p,\right.\right.$$
$$\left.4+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(3+p)}$$
$$(1+p)(2+p)\,\text{AppellF1}\left[3+p,\,2+p,\,6+p,\,4+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/$$
$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,6+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$
$$(6+p)\,\text{AppellF1}\left[2+p,\,p,\,7+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,6+p,\right.$$

$$3+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2-$$

$$\left(\text{AppellF1}\left[1+p,\ p,\ 2+p,\ 2+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^4\left(-\frac{1}{2}(2+p)\,\text{AppellF1}\left[2+p,\ p,\ 3+p,\ 3+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2}p\,\text{AppellF1}\left[2+p,\ 1+p,\right.$$

$$2+p,\ 3+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+$$

$$(2+p)\left(-\frac{1}{2}(1+p)\,\text{AppellF1}\left[2+p,\ p,\ 3+p,\ 3+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(2+p)}p(1+p)\,\text{AppellF1}\left[2+p,\right.$$

$$1+p,\ 2+p,\ 3+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)-$$

$$(2+p)\left(-\frac{1}{2}(2+p)\,\text{AppellF1}\left[3+p,\ p,\ 4+p,\ 4+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+\frac{1}{2(3+p)}p(2+p)\,\text{AppellF1}\left[3+p,\right.$$

$$1+p,\ 3+p,\ 4+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\left(-\frac{1}{2(3+p)}(2+p)^2\,\text{AppellF1}\left[3+p,\ 1+p,\ 3+p,\right.\right.$$

$$4+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2+$$

$$\frac{1}{2(3+p)}(1+p)(2+p)\,\text{HypergeometricPFQ}\left[\left\{\frac{3}{2}+\frac{p}{2},\ 2+p\right\},\ \left\{\frac{5}{2}+\frac{p}{2}\right\},\right.$$

$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\Big/$$

$$\left(\left(2+p\right)\text{AppellF1}\left[1+p,\ p,\ 2+p,\ 2+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-\right.$$

$$(2+p)\,\text{AppellF1}\left[2+p,\ p,\ 3+p,\ 3+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,\ 1+p,\ 2+p,\right.$$

$$\left.3+p,\ \text{Tan}\left[\frac{1}{2}(e+f x)\right],\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^2\right)+$$

$$\frac{1}{1+p}2^{1+p}p(2+p)\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-p}\text{Tan}\left[\frac{1}{2}(e+f x)\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)^{-6-p}$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{-1+p}$$

$$\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^p$$

$$\Bigg(\Bigg(\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^4\Bigg)\Big/$$

$$\Bigg((2+p)\,\text{AppellF1}\left[1+p,\,p,\,2+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(2+p)\,\text{AppellF1}\left[2+p,\,p,\,3+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\Big[2+p,\,1+p,\,2+p,\,3+p,$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Bigg)-$$

$$\Bigg(4\,\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^3\Bigg)\Big/$$

$$\Bigg((2+p)\,\text{AppellF1}\left[1+p,\,p,\,3+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(3+p)\,\text{AppellF1}\left[2+p,\,p,\,4+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\Big[2+p,\,1+p,\,3+p,\,3+p,$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Bigg)+$$

$$\Bigg(8\,\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)^2\Bigg)\Big/$$

$$\Bigg((2+p)\,\text{AppellF1}\left[1+p,\,p,\,4+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]-$$

$$(4+p)\,\text{AppellF1}\left[2+p,\,p,\,5+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+p\,\text{AppellF1}\Big[2+p,\,1+p,\,4+p,\,3+p,$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Bigg)-$$

$$\Bigg(8\,\text{AppellF1}\left[1+p,\,p,\,5+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right],\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\Bigg)\Big/$$

$$\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,5+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-(5+p)\,\text{AppellF1}\left[2+p,\,p,\,6+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,5+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$

$$\left(4\,\text{AppellF1}\left[1+p,\,p,\,6+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\right)\Big/\left((2+p)\,\text{AppellF1}\left[1+p,\,p,\,6+p,\,2+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]-(6+p)\,\text{AppellF1}\left[2+p,\,p,\,7+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]+p\,\text{AppellF1}\left[2+p,\,1+p,\,6+p,\,3+p,\,\text{Tan}\left[\frac{1}{2}(e+f x)\right],\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\bigg)$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}\right)\Bigg)\Bigg)\Bigg)$$

Problem 129: Result more than twice size of optimal antiderivative.

$$\int (a+a\,\text{Sin}[e+f x])^m\,(g\,\text{Tan}[e+f x])^p\,dx$$

Optimal (type 6, 111 leaves, 4 steps):

$$\frac{1}{f g\,(1+p)}\text{AppellF1}\left[1+p,\,\frac{1+p}{2},\,\frac{1}{2}(1-2m+p),\,2+p,\,\text{Sin}[e+f x],\,-\text{Sin}[e+f x]\right](1-\text{Sin}[e+f x])^{\frac{1+p}{2}}(1+\text{Sin}[e+f x])^{\frac{1}{2}(1-2m+p)}(a+a\,\text{Sin}[e+f x])^m\,(g\,\text{Tan}[e+f x])^{1+p}$$

Result (type 6, 3773 leaves):

$$\left(2(-3+p)\,\text{AppellF1}\left[\frac{1-p}{2},\,-p,\,1+m,\,\frac{3-p}{2},\,\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\text{Cot}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-m}(a+a\,\text{Sin}[e+f x])^m\,\text{Tan}[e+f x]^p\,(g\,\text{Tan}[e+f x])^p\right)\Big/\Bigg(f(-1+p)$$

$$\left(2p\,\text{AppellF1}\left[\frac{3-p}{2},\,1-p,\,1+m,\,\frac{5-p}{2},\,\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+2(1+m)\,\text{AppellF1}\left[\frac{3-p}{2},\,-p,\,2+m,\,\frac{5-p}{2},\,\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+(-3+p)\,\text{AppellF1}\left[\frac{1-p}{2},\,-p,\,1+m,\,\frac{3-p}{2},\,\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]$$

$$\text{Cot}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big)$$

$$\Bigg(\Bigg(2(-3+p)\,p\,\text{AppellF1}\left[\frac{1-p}{2},-p,1+m,\frac{3-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\text{Cot}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]$$

$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-m}\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]^{-1+p}\Bigg)\Big/$$

$$\Bigg((-1+p)\Bigg(2\,p\,\text{AppellF1}\left[\frac{3-p}{2},1-p,1+m,\frac{5-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+2(1+m)\,\text{AppellF1}\left[\frac{3-p}{2},-p,2+m,\frac{5-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+(-3+p)\,\text{AppellF1}\left[\frac{1-p}{2},-p,1+m,\frac{3-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\text{Cot}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(2(-3+p)\,\text{AppellF1}\left[\frac{1-p}{2},-p,1+m,\frac{3-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-m}$$

$$\text{Tan}[e+f x]^p\Bigg)\Big/\Bigg((-1+p)\Bigg(2\,p\,\text{AppellF1}\left[\frac{3-p}{2},1-p,1+m,\frac{5-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+2(1+m)$$

$$\text{AppellF1}\left[\frac{3-p}{2},-p,2+m,\frac{5-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+(-3+p)\,\text{AppellF1}\left[\frac{1-p}{2},-p,1+m,\frac{3-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\text{Cot}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(2\,m(-3+p)\,\text{AppellF1}\left[\frac{1-p}{2},-p,1+m,\frac{3-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-m}$$

$$\text{Tan}[e+f x]^p\Bigg)\Big/\Bigg((-1+p)\Bigg(2\,p\,\text{AppellF1}\left[\frac{3-p}{2},1-p,1+m,\frac{5-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+2(1+m)$$

$$\text{AppellF1}\left[\frac{3-p}{2},-p,2+m,\frac{5-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+(-3+p)\,\text{AppellF1}\left[\frac{1-p}{2},-p,1+m,\frac{3-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\text{Cot}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(\Bigg((-3+p)\,\text{AppellF1}\left[\frac{1-p}{2},-p,1+m,\frac{3-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big]\;\text{Cot}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\,\left(\text{Sec}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\right)^{-m}$$

$$\text{Tan}[e+f\,x]^p\Big)\Big/\Big(\,(-1+p)\,\Big(2\,p\,\text{AppellF1}\Big[\frac{3-p}{2},\,1-p,\,1+m,\,\frac{5-p}{2},$$

$$\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big]+2\,(1+m)$$

$$\text{AppellF1}\Big[\frac{3-p}{2},\,-p,\,2+m,\,\frac{5-p}{2},\,\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big]+$$

$$(-3+p)\,\text{AppellF1}\Big[\frac{1-p}{2},\,-p,\,1+m,\,\frac{3-p}{2},\,\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big]\;\text{Cot}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big)\Big)-$$

$$\Big(2\,(-3+p)\,\text{Cos}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\text{Cot}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]\,\left(\text{Sec}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\right)^{-m}$$

$$\Big(-\frac{1}{3-p}(1-p)\,p\,\text{AppellF1}\Big[1+\frac{1-p}{2},\,1-p,\,1+m,\,1+\frac{3-p}{2},\,\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big]\;\text{Sec}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]-\frac{1}{3-p}$$

$$(1+m)\,(1-p)\,\text{AppellF1}\Big[1+\frac{1-p}{2},\,-p,\,2+m,\,1+\frac{3-p}{2},\,\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big]\;\text{Sec}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]\Big)$$

$$\text{Tan}[e+f\,x]^p\Big)\Big/\Big(\,(-1+p)\,\Big(2\,p\,\text{AppellF1}\Big[\frac{3-p}{2},\,1-p,\,1+m,\,\frac{5-p}{2},$$

$$\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big]+2\,(1+m)$$

$$\text{AppellF1}\Big[\frac{3-p}{2},\,-p,\,2+m,\,\frac{5-p}{2},\,\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big]+$$

$$(-3+p)\,\text{AppellF1}\Big[\frac{1-p}{2},\,-p,\,1+m,\,\frac{3-p}{2},\,\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big]\;\text{Cot}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big)\Big)+$$

$$\Big(2\,(-3+p)\,\text{AppellF1}\Big[\frac{1-p}{2},\,-p,\,1+m,\,\frac{3-p}{2},\,\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big]\;\text{Cos}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2$$

$$\text{Cot}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]\,\left(\text{Sec}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\right)^{-m}\,\Big(-(-3+p)$$

$$\text{AppellF1}\Big[\frac{1-p}{2},\,-p,\,1+m,\,\frac{3-p}{2},\,\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big]$$

$$\text{Cot}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]\;\text{Csc}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2+(-3+p)\,\text{Cot}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2$$

$$\Big(-\frac{1}{3-p}(1-p)\,p\,\text{AppellF1}\Big[1+\frac{1-p}{2},\,1-p,\,1+m,\,1+\frac{3-p}{2},\,\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\Big]\;\text{Sec}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]^2\text{Tan}\left[\frac{1}{2}\,(-e+\frac{\pi}{2}-f\,x)\right]-\frac{1}{3-p}$$

$$\left(1+m\right)\left(1-p\right)\text{AppellF1}\left[1+\frac{1-p}{2},-p,2+m,1+\frac{3-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\Bigg)+$$
$$2 p\left(-\frac{1}{5-p}\left(1+m\right)\left(3-p\right)\text{AppellF1}\left[1+\frac{3-p}{2},1-p,2+m,1+\frac{5-p}{2},\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2$$
$$\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]+\frac{1}{5-p}\left(1-p\right)\left(3-p\right)\text{AppellF1}\left[1+\frac{3-p}{2},2-\right.$$
$$p,1+m,1+\frac{5-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]$$
$$\left.\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)+2\left(1+m\right)$$
$$\left(-\frac{1}{5-p}\left(3-p\right)p\,\text{AppellF1}\left[1+\frac{3-p}{2},1-p,2+m,1+\frac{5-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]-\frac{1}{5-p}$$
$$\left(2+m\right)\left(3-p\right)\text{AppellF1}\left[1+\frac{3-p}{2},-p,3+m,1+\frac{5-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)\right)$$
$$\text{Tan}[e+f x]^p\Bigg)\Bigg/\left(\left(-1+p\right)\left(2 p\,\text{AppellF1}\left[\frac{3-p}{2},1-p,1+m,\frac{5-p}{2},\right.\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+2\left(1+m\right)\text{AppellF1}\left[\right.$$
$$\frac{3-p}{2},-p,2+m,\frac{5-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+$$
$$\left(-3+p\right)\text{AppellF1}\left[\frac{1-p}{2},-p,1+m,\frac{3-p}{2},\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\text{Cot}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^2\right)\right)$$

Problem 130: Unable to integrate problem.

$$\int\left(a+a\,\text{Sin}[e+f x]\right)^m\text{Tan}[e+f x]^3\,dx$$

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

$$\frac{1}{4 f\left(1-m\right)}a\left(4+m\right)\text{Hypergeometric2F1}\left[1,-1+m,m,\frac{1}{2}\left(1+\text{Sin}[e+f x]\right)\right]\left(a+a\,\text{Sin}[e+f x]\right)^{-1+m}-$$
$$\frac{a^2\,\text{Sin}[e+f x]^2\left(a+a\,\text{Sin}[e+f x]\right)^{-1+m}}{f m\left(a-a\,\text{Sin}[e+f x]\right)}+$$
$$\frac{\left(a+a\,\text{Sin}[e+f x]\right)^{-1+m}\left(a\left(2-3 m-m^2\right)+2 a m\,\text{Sin}[e+f x]\right)}{2 f\left(1-m\right)m\left(1-\text{Sin}[e+f x]\right)}$$

Result (type 8, 23 leaves):

$$\int (a+a\,\text{Sin}[e+f x])^m\,\text{Tan}[e+f x]^3\,dx$$

Problem 131: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int (a+a\,\text{Sin}[e+f x])^m\,\text{Tan}[e+f x]\,dx$$

Optimal (type 5, 72 leaves, 3 steps):

$$-\frac{(a+a\,\text{Sin}[e+f x])^m}{2 f m}+\frac{1}{4 a f (1+m)}$$
$$\text{Hypergeometric2F1}\left[1,1+m,2+m,\frac{1}{2}(1+\text{Sin}[e+f x])\right](a+a\,\text{Sin}[e+f x])^{1+m}$$

Result (type 6, 9890 leaves):

$$-\Bigg(\Bigg(\text{Cot}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2 \text{Sin}[e+f x]\,(a+a\,\text{Sin}[e+f x])^m \left(\frac{1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}{1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}\right)^{2 m}$$

$$\Bigg(-\Bigg(\Bigg(2\,\text{AppellF1}\left[1,1-2 m,2 m,2,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]$$

$$\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^4\Bigg)\Big/\Bigg(\left(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)$$

$$\Bigg(-2\,\text{AppellF1}\left[1,1-2 m,2 m,2,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+$$

$$\Bigg(2 m\,\text{AppellF1}\Bigg[2,1-2 m,1+2 m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\Bigg[$$

$$\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\Bigg]^2\Bigg]+(-1+2 m)\,\text{AppellF1}\Bigg[2,2-2 m,2 m,3,\text{Tan}\Bigg[\frac{1}{4}\Bigg(-e+$$

$$\frac{\pi}{2}-f x\Bigg)\Bigg]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Bigg]\Bigg)\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Bigg)\Bigg)\Bigg)+$$

$$\Bigg(4\,\text{AppellF1}\left[1,-2 m,1+2 m,2,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]$$

$$\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^4\Bigg)\Big/\Bigg(\left(1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)$$

$$\Bigg(-2\,\text{AppellF1}\left[1,-2 m,1+2 m,2,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+$$

$$\Bigg(2 m\,\text{AppellF1}\Bigg[2,1-2 m,1+2 m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Bigg]+(1+2 m)\,\text{AppellF1}\Bigg[2,-2 m,2+2 m,3,$$

$$\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Bigg]\Bigg)\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Bigg)\Bigg)+$$

$$\Bigg((1+m)\,\text{AppellF1}\Bigg[1+2 m,2 m,1,2+2 m,\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,$$

$$1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]\left(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)\Big)\Big)\Big/$$

$$\Big(\left(1+2m\right)\Big(2\left(1+m\right)\text{AppellF1}\Big[1+2m,2m,1,2+2m,\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,$$

$$1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]-\Big(\text{AppellF1}\Big[2+2m,2m,2,3+2m,$$

$$\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+m$$

$$\text{AppellF1}\Big[2+2m,1+2m,1,3+2m,\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,$$

$$1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]\Big)\left(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)\Big)\Big)\Big)\Big/$$

$$\Big(f\left(\text{Cos}\left[\frac{\pi}{4}+\frac{1}{2}\left(e-\frac{\pi}{2}+f x\right)\right]-\text{Sin}\left[\frac{\pi}{4}+\frac{1}{2}\left(e-\frac{\pi}{2}+f x\right)\right]\right)$$

$$\Big(\text{Cos}\left[\frac{\pi}{4}+\frac{1}{2}\left(e-\frac{\pi}{2}+f x\right)\right]+$$

$$\text{Sin}\left[\frac{\pi}{4}+\frac{1}{2}\left(e-\frac{\pi}{2}+f x\right)\right]\Big)$$

$$\Big(-\frac{1}{2}\text{Cot}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]\text{Csc}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\left(\frac{1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}{1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}\right)^{2m}$$

$$\Big(-\Big(\Big(2\,\text{AppellF1}\Big[1,1-2m,2m,2,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]\text{Tan}\Big[$$

$$\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\Big]^4\Big)\Big/\Big(\left(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)\Big(-2\,\text{AppellF1}\Big[1,1-2m,$$

$$2m,2,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+\Big(2m\,\text{AppellF1}\Big[2,$$

$$1-2m,1+2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+$$

$$\left(-1+2m\right)\text{AppellF1}\Big[2,2-2m,2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]\Big)\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big)\Big)\Big)+$$

$$\Big(4\,\text{AppellF1}\Big[1,-2m,1+2m,2,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]$$

$$\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^4\Big)\Big/\Big(\left(1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)\Big(-2\,\text{AppellF1}\Big[1,-2m,$$

$$1+2m,2,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+\Big(2m\,\text{AppellF1}\Big[2,$$

$$1-2m,1+2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+$$

$$\left(1+2m\right)\text{AppellF1}\Big[2,-2m,2+2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,$$

$$-\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2]) \,\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2)) +$$

$$((1+m)\,\text{AppellF1}[1+2m, 2m, 1, 2+2m, \tfrac{1}{2}-\tfrac{1}{2}\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2,$$

$$1-\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2]\,(-1+\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2)) \Big/$$

$$((1+2m)\,(2\,(1+m)\,\text{AppellF1}[1+2m, 2m, 1, 2+2m, \tfrac{1}{2}-\tfrac{1}{2}\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2,$$

$$1-\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2] - (\text{AppellF1}[2+2m, 2m, 2, 3+2m,$$

$$\tfrac{1}{2}-\tfrac{1}{2}\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2, 1-\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2] +$$

$$m\,\text{AppellF1}[2+2m, 1+2m, 1, 3+2m, \tfrac{1}{2}-\tfrac{1}{2}\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2,$$

$$1-\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2])\,(-1+\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2)))) +$$

$$2\,m\,\text{Cot}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2 \left(\frac{1-\text{Tan}[\frac{1}{4}(-e+\frac{\pi}{2}-f x)]^2}{1+\text{Tan}[\frac{1}{4}(-e+\frac{\pi}{2}-f x)]^2}\right)^{-1+2m}$$

$$(-((\text{Sec}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2\,\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]\,(1-\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2)) \Big/$$

$$(2\,(1+\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2)^2)) - \frac{\text{Sec}[\frac{1}{4}(-e+\frac{\pi}{2}-f x)]^2\,\text{Tan}[\frac{1}{4}(-e+\frac{\pi}{2}-f x)]}{2\,(1+\text{Tan}[\frac{1}{4}(-e+\frac{\pi}{2}-f x)]^2)})$$

$$(-((2\,\text{AppellF1}[1, 1-2m, 2m, 2, \text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2, -\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2]\,\text{Tan}[$$

$$\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^4) \Big/ (((-1+\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2)\,(-2\,\text{AppellF1}[1, 1-2m,$$

$$2m, 2, \text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2, -\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2] + (2\,m\,\text{AppellF1}[2,$$

$$1-2m, 1+2m, 3, \text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2, -\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2] +$$

$$(-1+2m)\,\text{AppellF1}[2, 2-2m, 2m, 3, \text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2,$$

$$-\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2])\,\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2))) +$$

$$(4\,\text{AppellF1}[1, -2m, 1+2m, 2, \text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2, -\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2]$$

$$\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^4) \Big/ (((1+\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2)\,(-2\,\text{AppellF1}[1, -2m,$$

$$1+2m, 2, \text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2, -\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2] + (2\,m\,\text{AppellF1}[2,$$

$$1-2m, 1+2m, 3, \text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2, -\text{Tan}[\tfrac{1}{4}(-e+\tfrac{\pi}{2}-f x)]^2] +$$

$$(1+2m)\,\text{AppellF1}\left[2,-2m,2+2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big)\Big)+$$
$$\Big(\Big((1+m)\,\text{AppellF1}\left[1+2m,2m,1,2+2m,\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\right.$$
$$\left.1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\left(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)\Big)\Big/$$
$$\Big(\Big((1+2m)\,\Big(2\,(1+m)\,\text{AppellF1}\left[1+2m,2m,1,2+2m,\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\right.$$
$$\left.1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]-\Big(\text{AppellF1}\Big[2+2m,2m,2,3+2m,$$
$$\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+$$
$$m\,\text{AppellF1}\left[2+2m,1+2m,1,3+2m,\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\right.$$
$$\left.1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\Big)\left(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)\Big)\Big)\Big)\Big)+$$
$$\text{Cot}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\left(\frac{1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}{1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}\right)^{2m}$$
$$\Big(\Big(\text{AppellF1}\left[1,1-2m,2m,2,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^5\Big)\Big/$$
$$\Big(\Big(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big)^2\Big(-2\,\text{AppellF1}\Big[1,1-2m,2m,2,$$
$$\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+\Big(2m\,\text{AppellF1}\Big[2,$$
$$1-2m,1+2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+$$
$$(-1+2m)\,\text{AppellF1}\left[2,2-2m,2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\Big)\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big)\Big)-$$
$$\Big(2\,\text{AppellF1}\left[1,1-2m,2m,2,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^3\Big)\Big/$$
$$\Big(\Big(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big)\Big(-2\,\text{AppellF1}\Big[1,1-2m,2m,2,$$
$$\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+\Big(2m\,\text{AppellF1}\Big[2,$$
$$1-2m,1+2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+$$

$$(-1+2m)\,\text{AppellF1}\left[2,2-2m,2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right)\right)-$$
$$\left(2\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^4\left(-\frac{1}{2}m\,\text{AppellF1}\left[2,1-2m,1+2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]+\frac{1}{4}$$
$$(1-2m)\,\text{AppellF1}\left[2,2-2m,2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]\right)\right)\Big/$$
$$\left(\left(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right)\left(-2\,\text{AppellF1}\left[1,1-2m,2m,2,\right.\right.\right.$$
$$\left.\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]+\left(2m\,\text{AppellF1}\left[2,\right.\right.$$
$$\left.1-2m,1+2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]+$$
$$(-1+2m)\,\text{AppellF1}\left[2,2-2m,2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right)\right)-$$
$$\left(2\,\text{AppellF1}\left[1,-2m,1+2m,2,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]\right.$$
$$\left.\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^5\right)\Big/$$
$$\left(\left(1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right)^2\left(-2\,\text{AppellF1}\left[1,-2m,1+2m,2,\right.\right.\right.$$
$$\left.\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]+\left(2m\,\text{AppellF1}\left[2,\right.\right.$$
$$\left.1-2m,1+2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]+$$
$$(1+2m)\,\text{AppellF1}\left[2,-2m,2+2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right)\right)+$$
$$\left(4\,\text{AppellF1}\left[1,-2m,1+2m,2,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]\right.$$
$$\left.\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^3\right)\Big/$$
$$\left(\left(1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right)\left(-2\,\text{AppellF1}\left[1,-2m,1+2m,2,\right.\right.\right.$$
$$\left.\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]+\left(2m\,\text{AppellF1}\left[2,\right.\right.$$
$$\left.1-2m,1+2m,3,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-fx\right)\right]^2\right]+$$

$$(1+2\,m)\;\text{AppellF1}\Big[2,\,-2\,m,\,2+2\,m,\,3,\,\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big]\Big)\;\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big)\Big)+$$

$$\Big(4\,\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^4\;\Big(-\frac{1}{2}\,m\,\text{AppellF1}\Big[2,\,1-2\,m,\,1+2\,m,\,3,\,\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big]\;\text{Sec}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\;\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]-\frac{1}{4}$$

$$(1+2\,m)\;\text{AppellF1}\Big[2,\,-2\,m,\,2+2\,m,\,3,\,\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big]\;\text{Sec}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\;\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]\Big)\Big)\Big/$$

$$\Big(\Big(1+\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big)\;\Big(-2\,\text{AppellF1}\Big[1,\,-2\,m,\,1+2\,m,\,2,$$

$$\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2,\,-\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big]+\Big(2\,m\,\text{AppellF1}\Big[2,$$

$$1-2\,m,\,1+2\,m,\,3,\,\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2,\,-\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big]+$$

$$(1+2\,m)\;\text{AppellF1}\Big[2,\,-2\,m,\,2+2\,m,\,3,\,\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big]\Big)\;\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big)\Big)+$$

$$\Big((1+m)\;\text{AppellF1}\Big[1+2\,m,\,2\,m,\,1,\,2+2\,m,\,\frac{1}{2}-\frac{1}{2}\,\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2,$$

$$1-\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big]\;\text{Sec}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\;\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]\Big)\Big/$$

$$\Big(2\;(1+2\,m)\;\Big(2\;(1+m)\;\text{AppellF1}\Big[1+2\,m,\,2\,m,\,1,\,2+2\,m,\,\frac{1}{2}-\frac{1}{2}\,\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2,$$

$$1-\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big]-\Big(\text{AppellF1}\Big[2+2\,m,\,2\,m,\,2,\,3+2\,m,$$

$$\frac{1}{2}-\frac{1}{2}\,\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2,\,1-\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big]+$$

$$m\,\text{AppellF1}\Big[2+2\,m,\,1+2\,m,\,1,\,3+2\,m,\,\frac{1}{2}-\frac{1}{2}\,\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2,$$

$$1-\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big]\Big)\;\Big(-1+\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big)\Big)\Big)+$$

$$\Big((1+m)\;\Big(-\frac{1}{2\;(2+2\,m)}\,(1+2\,m)\;\text{AppellF1}\Big[2+2\,m,\,2\,m,\,2,\,3+2\,m,\,\frac{1}{2}-\frac{1}{2}$$

$$\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2,\,1-\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big]\;\text{Sec}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2$$

$$\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]-\frac{1}{2\;(2+2\,m)}\,m\;(1+2\,m)\;\text{AppellF1}\Big[2+2\,m,\,1+2\,m,$$

$$1,\,3+2\,m,\,\frac{1}{2}-\frac{1}{2}\,\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2,\,1-\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big]$$

$$\text{Sec}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\;\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]\Big)\;\Big(-1+\text{Tan}\Big[\frac{1}{4}\,\Big(-e+\frac{\pi}{2}-f\,x\Big)\Big]^2\Big)\Big)\Big/$$

$$((1+2 m) \, (2 \, (1+m) \, \text{AppellF1}[1+2 m, 2 m, 1, 2+2 m, \frac{1}{2}-\frac{1}{2} \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2,$$

$$1-\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2] - (\text{AppellF1}[2+2 m, 2 m, 2, 3+2 m,$$

$$\frac{1}{2}-\frac{1}{2} \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2, 1-\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2] +$$

$$m \, \text{AppellF1}[2+2 m, 1+2 m, 1, 3+2 m, \frac{1}{2}-\frac{1}{2} \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2,$$

$$1-\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2]) \, (-1+\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2))) +$$

$$(2 \, \text{AppellF1}[1, 1-2 m, 2 m, 2, \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2, -\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2]$$

$$\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^4 \, (\frac{1}{2} (2 m \, \text{AppellF1}[2, 1-2 m, 1+2 m, 3,$$

$$\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2, -\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2] + (-1+2 m) \, \text{AppellF1}[$$

$$2, 2-2 m, 2 m, 3, \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2, -\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2])$$

$$\text{Sec}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2 \, \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)] - 2 \, (-\frac{1}{2} m \, \text{AppellF1}[2,$$

$$1-2 m, 1+2 m, 3, \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2, -\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2]$$

$$\text{Sec}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2 \, \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)] + \frac{1}{4} (1-2 m) \, \text{AppellF1}[$$

$$2, 2-2 m, 2 m, 3, \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2, -\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2]$$

$$\text{Sec}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2 \, \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]) + \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2$$

$$(2 m \, (-\frac{1}{3} (1+2 m) \, \text{AppellF1}[3, 1-2 m, 2+2 m, 4, \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2,$$

$$-\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2] \, \text{Sec}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2 \, \text{Tan}[$$

$$\frac{1}{4} (-e+\frac{\pi}{2}-f x)] + \frac{1}{3} (1-2 m) \, \text{AppellF1}[3, 2-2 m, 1+2 m, 4, \text{Tan}[\frac{1}{4}$$

$$(-e+\frac{\pi}{2}-f x)]^2, -\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2] \, \text{Sec}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2$$

$$\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]) + (-1+2 m) \, (-\frac{2}{3} m \, \text{AppellF1}[3, 2-2 m,$$

$$1+2 m, 4, \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2, -\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2]$$

$$\text{Sec}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2 \, \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)] + \frac{1}{3} (2-2 m) \, \text{AppellF1}[$$

$$3, 3-2 m, 2 m, 4, \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2, -\text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2]$$

$$\text{Sec}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]^2 \, \text{Tan}[\frac{1}{4} (-e+\frac{\pi}{2}-f x)]))))) \Big/$$

$$\Big(\Big(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big)\ \Big(-2\,\text{AppellF1}\Big[1,\,1-2m,\,2m,\,2,$$

$$\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+\Big(2\,m\,\text{AppellF1}\Big[2,$$

$$1-2m,\,1+2m,\,3,\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+$$

$$(-1+2m)\ \text{AppellF1}\Big[2,\,2-2m,\,2m,\,3,\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]\Big)\ \text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big)^2\Big)-$$

$$\Big(4\,\text{AppellF1}\Big[1,\,-2m,\,1+2m,\,2,\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]$$

$$\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^4\ \Big(\frac{1}{2}\ \Big(2\,m\,\text{AppellF1}\Big[2,\,1-2m,\,1+2m,\,3,$$

$$\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+(1+2m)\ \text{AppellF1}\Big[$$

$$2,\,-2m,\,2+2m,\,3,\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]\Big)$$

$$\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\ \text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]-2\ \Big(-\frac{1}{2}\,m\,\text{AppellF1}\Big[2,$$

$$1-2m,\,1+2m,\,3,\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]$$

$$\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\ \text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]-\frac{1}{4}\ (1+2m)\ \text{AppellF1}\Big[$$

$$2,\,-2m,\,2+2m,\,3,\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]$$

$$\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\ \text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]\Big)+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2$$

$$\Big(2\,m\ \Big(-\frac{1}{3}\ (1+2m)\ \text{AppellF1}\Big[3,\,1-2m,\,2+2m,\,4,\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]\ \text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\ \text{Tan}\Big[$$

$$\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\Big]+\frac{1}{3}\ (1-2m)\ \text{AppellF1}\Big[3,\,2-2m,\,1+2m,\,4,\,\text{Tan}\Big[\frac{1}{4}$$

$$\left(-e+\frac{\pi}{2}-f x\right)\Big]^2,\,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]\ \text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2$$

$$\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]\Big)+(1+2m)\ \Big(-\frac{2}{3}\,m\,\text{AppellF1}\Big[3,\,1-2m,$$

$$2+2m,\,4,\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]$$

$$\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\ \text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]-\frac{1}{3}\ (2+2m)\ \text{AppellF1}\Big[$$

$$3,\,-2m,\,3+2m,\,4,\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]$$

$$\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\ \text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]\Big)\Big)\Big)\Big)\Big)\Big/$$

$$\left(\left(1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)\left(-2\,\text{AppellF1}\left[1,\,-2\,m,\,1+2\,m,\,2,\right.\right.\right.$$

$$\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]+\left(2\,m\,\text{AppellF1}\left[2,\right.\right.$$

$$1-2\,m,\,1+2\,m,\,3,\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]+$$

$$(1+2\,m)\,\text{AppellF1}\left[2,\,-2\,m,\,2+2\,m,\,3,\,\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2,\right.$$

$$\left.\left.\left.-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)^2\right)-$$

$$\left((1+m)\,\text{AppellF1}\left[1+2\,m,\,2\,m,\,1,\,2+2\,m,\,\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2,\right.\right.$$

$$\left.1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]\left(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)$$

$$\left(-\frac{1}{2}\left(\text{AppellF1}\left[2+2\,m,\,2\,m,\,2,\,3+2\,m,\,\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2,\right.\right.\right.$$

$$\left.1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]+m\,\text{AppellF1}\left[2+2\,m,\,1+2\,m,\,1,\,3+2\,m,\right.$$

$$\left.\left.\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2,\,1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]\right)$$

$$\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]+2\,(1+m)$$

$$\left(-\frac{1}{2\,(2+2\,m)}(1+2\,m)\,\text{AppellF1}\left[2+2\,m,\,2\,m,\,2,\,3+2\,m,\right.\right.$$

$$\left.\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2,\,1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]-\frac{1}{2\,(2+2\,m)}$$

$$m\,(1+2\,m)\,\text{AppellF1}\left[2+2\,m,\,1+2\,m,\,1,\,3+2\,m,\,\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2,\right.$$

$$\left.\left.1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)-$$

$$\left(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)\left(-\frac{1}{3+2\,m}(2+2\,m)\,\text{AppellF1}\left[3+2\,m,\,2\,m,\right.\right.$$

$$\left.3,\,4+2\,m,\,\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2,\,1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]-\frac{1}{2\,(3+2\,m)}$$

$$m\,(2+2\,m)\,\text{AppellF1}\left[3+2\,m,\,1+2\,m,\,2,\,4+2\,m,\,\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2,\right.$$

$$\left.1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f\,x\right)\right]+$$

$$m\left(-\frac{1}{2\,(3+2\,m)}(2+2\,m)\,\text{AppellF1}\left[3+2\,m,\,1+2\,m,\,2,\,4+2\,m,\right.\right.$$

$$\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\ 1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]$$
$$\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2 \text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]-\frac{1}{4\,(3+2 m)}$$
$$(1+2 m)\ (2+2 m)\ \text{AppellF1}\Big[3+2 m,\ 2+2 m,\ 1,\ 4+2 m,$$
$$\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\ 1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]$$
$$\text{Sec}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2 \text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/$$
$$\Bigg((1+2 m)\ \Bigg(2\ (1+m)\ \text{AppellF1}\Big[1+2 m,\ 2 m,\ 1,\ 2+2 m,\ \frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,$$
$$1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]-\Bigg(\text{AppellF1}\Big[2+2 m,\ 2 m,\ 2,\ 3+2 m,$$
$$\frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,\ 1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+$$
$$m\ \text{AppellF1}\Big[2+2 m,\ 1+2 m,\ 1,\ 3+2 m,\ \frac{1}{2}-\frac{1}{2}\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2,$$
$$1-\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]\Bigg)\ \left(-1+\text{Tan}\left[\frac{1}{4}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^2\Bigg)\Bigg)\Bigg)\Bigg)$$

Problem 132: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Cot}[e+f x]\ (a+a\,\text{Sin}[e+f x])^m\,dx$$

Optimal (type 5, 43 leaves, 2 steps):

$$-\frac{1}{a f\,(1+m)}\text{Hypergeometric2F1}[1,\ 1+m,\ 2+m,\ 1+\text{Sin}[e+f x]]\ (a+a\,\text{Sin}[e+f x])^{1+m}$$

Result (type 6, 12 204 leaves):

$$-\frac{1}{f}\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{-2 m}$$
$$(a+a\,\text{Sin}[e+f x])^m\ \Bigg(\frac{1}{2 m}\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2 m}\ \Big(-1+(-\text{Csc}[e+f x])^m$$
$$\text{Hypergeometric2F1}\Big[m,\ m,\ 1+m,\ 2\,\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2 \text{Csc}[e+f x]\Big]\Big)+$$
$$\Bigg(\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2+2 m} \text{Csc}[e+f x]\ \left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-m}$$
$$\Bigg(4 m\,\text{Hypergeometric2F1}\Big[\frac{1}{2},\ 1+m,\ \frac{3}{2},\ -\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]$$

$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^m \text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]+\text{AppellF1}\left[2 m, m, m, 1+2 m, -\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}, -\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m \left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m -$$

$$\text{AppellF1}\left[2 m, m, m, 1+2 m, \frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}, \frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$

$$\left.\left.\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m \left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\right)\right)\Big/$$

$$\left(16 m \left(-\frac{1}{8}\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-m} \text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right.\right.$$

$$\left(4 m \,\text{Hypergeometric2F1}\left[\frac{1}{2}, 1+m, \frac{3}{2}, -\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\right.$$

$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^m \text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]+\text{AppellF1}\left[2 m, m, m, 1+2 m, -\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}, -\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m \left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m -$$

$$\text{AppellF1}\left[2 m, m, m, 1+2 m, \frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}, \frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$

$$\left.\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m \left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\right)+$$

$$\frac{1}{8 m}\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-m}\left(2 m \,\text{Hypergeometric2F1}\left[\frac{1}{2}, 1+m, \frac{3}{2},\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{1+m}+4$$

$$m^2 \,\text{Hypergeometric2F1}\left[\frac{1}{2}, 1+m, \frac{3}{2}, -\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]$$

$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^m \text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2+$$

$$\left(\left((1-i)\, m^2 \,\text{AppellF1}\left[1+2 m, m, 1+m, 2+2 m, -\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\right.\right.\right.$$

$$-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\Big]\ \text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Bigg)\Big/\Bigg((1+2 m)$$

$$\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\Bigg)+\Bigg((1+i)\ m^2\ \text{AppellF1}\Big[1+2 m,1+m,$$

$$m,2+2 m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\Big]$$

$$\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Bigg)\Big/\left((1+2 m)\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\Bigg)$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m+m\ \text{AppellF1}\Big[$$

$$2 m,m,m,1+2 m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\Big]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{-1+m}\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m$$

$$\Bigg(\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)}-\Bigg(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2$$

$$\left(-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)\Bigg)\Big/\left(2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\Bigg)+m$$

$$\text{AppellF1}\Big[2 m,m,m,1+2 m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},$$

$$-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\Big]\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m$$

$$\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{-1+m}\Bigg(\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)}-$$

$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\left(i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)\right)\Big/$$

$$\left(2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\Bigg)-\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m$$

$$\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\Bigg(-\Bigg(\Bigg(\Bigg((1+i)\ m^2\ \text{AppellF1}\Big[1+2 m,m,1+m,$$

$$2+2\,m,\ \frac{1-i}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},\ \frac{1+i}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\Big]$$

$$\mathrm{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\Bigg)\Bigg/\left(\left(1+2\,m\right)\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)\Bigg)-$$

$$\Bigg(\left(1-i\right)m^2\,\mathrm{AppellF1}\Big[1+2\,m,\ 1+m,\ m,\ 2+2\,m,\ \frac{1-i}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},$$

$$\frac{1+i}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\Big]\,\mathrm{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\Bigg)\Bigg/$$

$$\left(\left(1+2\,m\right)\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)\Bigg)-m\,\mathrm{AppellF1}\Big[2\,m,\ m,$$

$$m,\ 1+2\,m,\ \frac{1-i}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},\ \frac{1+i}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\Big]$$

$$\left(\frac{-i+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^{-1+m}\left(\frac{i+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^{m}$$

$$\Bigg(-\left(\left(\mathrm{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\left(-i+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)\right)\Bigg/\left(2\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\right.\right.\right.\right.\right.$$

$$\left.\left.\left.\left.\left.\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)\right)+\frac{\mathrm{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2}{2\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)}\Bigg)-m\,\mathrm{AppellF1}\Big[$$

$$2\,m,\ m,\ m,\ 1+2\,m,\ \frac{1-i}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},\ \frac{1+i}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\Big]$$

$$\left(\frac{-i+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^{m}\left(\frac{i+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^{-1+m}$$

$$\Bigg(-\left(\left(\mathrm{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\left(i+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)\right)\Bigg/\right.$$

$$\left.\left(2\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)\right)+\frac{\mathrm{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2}{2\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)}\Bigg)+2$$

$$m\left(\mathrm{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)^{1+m}\Bigg(-\mathrm{Hypergeometric2F1}\Big[\frac{1}{2},\ 1+m,\ \frac{3}{2},$$

$$-\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\Big]+\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)^{-1-m}\Bigg)\Bigg)\Bigg)\Bigg)-$$

$$\left(\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2m}\text{Csc}[e+f x]\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-m}\right.$$
$$\text{Sin}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2$$
$$\left(4\,m\,\text{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\right.$$
$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^m\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]-$$
$$\text{AppellF1}\left[2m,m,m,1+2m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\right.$$
$$\left.-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$
$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m+$$
$$\text{AppellF1}\left[2m,m,m,1+2m,\frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$
$$\left.\left.\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\right)\right)\Big/$$
$$\left(16\,m\left(\frac{1}{8}\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-m}\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right.\right.$$
$$\left(4\,m\,\text{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]\right.$$
$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^m\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]-\text{AppellF1}\left[2m,m,m,\right.$$
$$\left.1+2m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$
$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m+$$
$$\text{AppellF1}\left[2m,m,m,1+2m,\frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$
$$\left.\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\right)-$$

$$\frac{1}{8\,m}\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)^{-m}\Bigg(2\,m\,\text{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)^{1+m}+4\,m^2\,\text{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)^m\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2-$$

$$\Bigg(\Bigg(\Bigg((1-i)\,m^2\,\text{AppellF1}\Big[1+2\,m,m,1+m,2+2\,m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\Big]\,\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\Bigg)\Big/\left((1+2\,m)\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)+\Bigg((1+i)\,m^2\,\text{AppellF1}\Big[1+2\,m,1+m,m,2+2\,m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\Big]\,\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\Bigg)\Big/\left((1+2\,m)\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)\Bigg)$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m-m\,\text{AppellF1}\Big[2\,m,m,m,1+2\,m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\Big]\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^{-1+m}$$

$$\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\Bigg(\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)}-\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\left(-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)\right)\Big/\left(2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)\Bigg)-m\,\text{AppellF1}\Big[2\,m,m,m,$$

$$1+2\,m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\Big]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m \left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{-1+m}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)}-\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right.\right.$$

$$\left.\left.\left(i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)\right)\Big/\left(2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\right)+$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m \left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m$$

$$\left(-\left(\left((1+i)\, m^2\, \text{AppellF1}\left[1+2m, m, 1+m, 2+2m, \frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\right.\right.\right.\right.$$

$$\left.\left.\frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)\Big/$$

$$\left.\left((1+2m)\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\right)-\left((1-i)\, m^2\, \text{AppellF1}\left[1+2m,\right.\right.$$

$$\left.1+m, m, 2+2m, \frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}, \frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$

$$\left.\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)\Big/\left((1+2m)\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\right)+m$$

$$\text{AppellF1}\left[2m, m, m, 1+2m, \frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\right.$$

$$\left.\frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{-1+m}$$

$$\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\left(-\left(\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right.\right.\right.$$

$$\left.\left.\left(-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)\right)\Big/\left(2\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\right)+$$

$$\left.\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}{2\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)}\right)+m\,\text{AppellF1}\left[2m, m, m, 1+2m,\right.$$

$$\left.\frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}, \frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$

$$\left(\frac{-\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{m}\left(\frac{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{-1+m}$$

$$\left(-\left(\left(\mathrm{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2}\left(\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)\right)\Big/\right.\right.$$

$$\left.\left(2\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^{2}\right)\right)+\frac{\mathrm{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2}}{2\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)}\right)+2$$

$$m\left(\mathrm{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2}\right)^{1+m}\left(-\mathrm{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},\right.\right.$$

$$\left.\left.-\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2}\right]+\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2}\right)^{-1-m}\right)\Bigg)\Bigg)\Bigg)\Bigg)+$$

$$\frac{1}{f}\mathrm{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{-2m}\left(a+a\,\mathrm{Sin}[e+f x]\right)^{m}$$

$$\left(-\frac{1}{2m}\right.$$

$$\mathrm{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2m}$$

$$\left(-1+\right.$$

$$\left(-\mathrm{Csc}[e+f x]\right)^{m}$$

$$\mathrm{Hypergeometric2F1}\left[m,m,1+m,\right.$$

$$\left.\left.2\,\mathrm{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2}\mathrm{Csc}[e+f x]\right]\right)+$$

$$\left(\mathrm{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2+2m}\left(\mathrm{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2}\right)^{-m}\right.$$

$$\left(4\,m\,\mathrm{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},-\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2}\right]\right.$$

$$\left(\mathrm{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2}\right)^{m}\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]+$$

$$\mathrm{AppellF1}\left[2m,m,m,1+2m,-\frac{1+\mathrm{i}}{-1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},-\frac{1-\mathrm{i}}{-1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$

$$\left(\frac{-\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{m}\left(\frac{\mathrm{i}+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{m}-$$

$$\mathrm{AppellF1}\left[2m,m,m,1+2m,\frac{1-\mathrm{i}}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\frac{1+\mathrm{i}}{1+\mathrm{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$

$$\left.\left.\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\right)\right)\Big/$$

$$\Bigg(16\,m\left(\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]-\text{Sin}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)$$

$$\left(\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]+\text{Sin}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)$$

$$\Bigg(-\frac{1}{8}\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-m}\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]$$

$$\Bigg(4\,m\,\text{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]$$

$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^m\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]+\text{AppellF1}\Big[2\,m,m,m,1+$$

$$2\,m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\Big]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m-$$

$$\text{AppellF1}\left[2\,m,m,m,1+2\,m,\frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$

$$\left.\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m\right)+$$

$$\frac{1}{8\,m}\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-m}\Bigg(2\,m\,\text{Hypergeometric2F1}\Big[\frac{1}{2},1+m,\frac{3}{2},$$

$$-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{1+m}+$$

$$4\,m^2\,\text{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]$$

$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^m\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2+$$

$$\Bigg(\Bigg((1-i)\,m^2\,\text{AppellF1}\Big[1+2\,m,m,1+m,2+2\,m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},$$

$$\left.-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\Big]\,\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)\Big/$$

$$\left(\left(1+2\,m\right)\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)+\left(\left(1+i\right)m^2\,\text{AppellF1}\left[1+2\,m,\,1+m,\right.\right.$$

$$\left.m,\,2+2\,m,\,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},\,-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right]$$

$$\left.\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)\Big/\left(\left(1+2\,m\right)\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)\Bigg)$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m+$$

$$m\,\text{AppellF1}\left[2\,m,\,m,\,m,\,1+2\,m,\,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},\right.$$

$$\left.-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right]\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^{-1+m}$$

$$\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\left(\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)}-\right.$$

$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\left(-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)\right)\Big/$$

$$\left.\left(2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)\right)+m\,\text{AppellF1}\left[2\,m,\,m,\,m,\right.$$

$$\left.1+2\,m,\,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},\,-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^{-1+m}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)}-\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right.\right.$$

$$\left.\left.\left(i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)\right)\Big/\left(2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)\right)-$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m$$

$$\left(-\left(\left(\left(1+i\right)m^2\,\text{AppellF1}\left[1+2\,m,\,m,\,1+m,\,2+2\,m,\,\frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},\right.\right.\right.\right.$$

$$\frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\Big]\ \text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Bigg)\Big/$$

$$\left(\left(1+2 m\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\Bigg)-\Bigg(\left(1-i\right) m^2\ \text{AppellF1}\Big[1+2 m,$$

$$1+m,\ m,\ 2+2 m,\ \frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\ \frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\Big]$$

$$\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Bigg)\Big/\left(\left(1+2 m\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\Bigg)-m$$

$$\text{AppellF1}\Big[2 m,\ m,\ m,\ 1+2 m,\ \frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\ \frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\Big]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{-1+m}\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{m}$$

$$\Bigg(-\Bigg(\Bigg(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\left(-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)\Bigg)\Big/$$

$$\left(2\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\Bigg)+\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}{2\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)}\Bigg)-m$$

$$\text{AppellF1}\Big[2 m,\ m,\ m,\ 1+2 m,\ \frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\ \frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\Big]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{m}\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{-1+m}$$

$$\Bigg(-\Bigg(\Bigg(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\left(i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)\Bigg)\Big/$$

$$\left(2\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\Bigg)+\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}{2\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)}\Bigg)+$$

$$2 m\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{1+m}\Bigg(-\text{Hypergeometric2F1}\Big[\frac{1}{2},\ 1+m,\ \frac{3}{2},$$

$$-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\Big]+\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-1-m}\Bigg)\Bigg)\Bigg)\Bigg)-$$

$$\Bigg(\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^{2 m}\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-m}\text{Sin}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2$$

$$\left(4\,m\,\text{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]\right.$$

$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)^m\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]-$$

$$\text{AppellF1}\left[2m,m,m,1+2m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m+$$

$$\text{AppellF1}\left[2m,m,m,1+2m,\frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},\frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right]$$

$$\left.\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\right)\Big/$$

$$\left(16\,m\left(\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]-\text{Sin}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)\right.$$

$$\left(\text{Cos}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]+\right.$$

$$\left.\text{Sin}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)$$

$$\left(\frac{1}{8}\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)^{-m}\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right.$$

$$\left(4\,m\,\text{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]\right.$$

$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)^m\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]-\text{AppellF1}\left[2m,m,m,1+\right.$$

$$\left.2m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m+$$

$$\text{AppellF1}\left[2m,m,m,1+2m,\frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},\frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right]$$

$$\left.\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\right)-$$

$$\frac{1}{8\,m}\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)^{-m}\left(2\,m\,\text{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)^{1+m}+$$
$$4\,m^2\,\text{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right]$$
$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)^m\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2-$$
$$\left(\left(\left((1-i)\,m^2\,\text{AppellF1}\left[1+2\,m,m,1+m,2+2\,m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},\right.\right.\right.\right.$$
$$\left.\left.-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right]\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)\Big/$$
$$\left((1+2\,m)\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)+\left((1+i)\,m^2\,\text{AppellF1}\left[1+2\,m,1+m,\right.\right.$$
$$\left.m,2+2\,m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right]$$
$$\left.\left.\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\right)\Big/\left((1+2\,m)\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)\right)$$
$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m-$$
$$m\,\text{AppellF1}\left[2\,m,m,m,1+2\,m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},\right.$$
$$\left.-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right]\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^{-1+m}$$
$$\left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right)^m\left(\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)}-\right.$$
$$\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]^2\left(-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)\right)\Big/$$
$$\left.\left(2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]\right)^2\right)\right)-m\,\text{AppellF1}\left[2\,m,m,m,\right.$$
$$\left.1+2\,m,-\frac{1+i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]},-\frac{1-i}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f\,x\right)\right]}\right]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m \left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{-1+m}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)}-\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right.\right.$$

$$\left.\left.\left(i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)\right)\Big/\left(2\left(-1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\right)+$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m \left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m$$

$$\left(-\left(\left(\left(1+i\right) m^2\,\text{AppellF1}\left[1+2m,\ m,\ 1+m,\ 2+2m,\ \frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\right.\right.\right.\right.$$

$$\left.\left.\frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)\Big/$$

$$\left.\left(\left(1+2m\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\right)-\left(\left(1-i\right) m^2\,\text{AppellF1}\left[1+2m,\right.\right.$$

$$\left.1+m,\ m,\ 2+2m,\ \frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\ \frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$

$$\left.\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)\Big/\left(\left(1+2m\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\right)+m$$

$$\text{AppellF1}\left[2m,\ m,\ m,\ 1+2m,\ \frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\ \frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{-1+m} \left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m$$

$$\left(-\left(\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\left(-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)\right)\Big/\right.\right.$$

$$\left.\left.\left(2\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\right)+\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}{2\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)}\right)+m$$

$$\text{AppellF1}\left[2m,\ m,\ m,\ 1+2m,\ \frac{1-i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]},\ \frac{1+i}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right]$$

$$\left(\frac{-i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^m \left(\frac{i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}{1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]}\right)^{-1+m}$$

$$\left(-\left(\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\left(i+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)\right)\Big/\right.\right.$$
$$\left.\left(2\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)^2\right)\right)+\frac{\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2}{2\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]\right)}\Bigg)+$$
$$2 m\left(\text{Sec}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{1+m}\left(-\text{Hypergeometric2F1}\left[\frac{1}{2},1+m,\frac{3}{2},\right.\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right]+\left(1+\text{Tan}\left[\frac{1}{2}\left(-e+\frac{\pi}{2}-f x\right)\right]^2\right)^{-1-m}\right)\right)\right)\right)$$

Problem 133: Unable to integrate problem.

$$\int \text{Cot}[e+f x]^3\,(a+a\,\text{Sin}[e+f x])^m\,dx$$

Optimal (type 5, 83 leaves, 3 steps):

$$-\frac{\text{Csc}[e+f x]^2\,(a+a\,\text{Sin}[e+f x])^{2+m}}{2\,a^2\,f}-\frac{1}{2\,a^2\,f\,(2+m)}$$
$$(2-m)\,\text{Hypergeometric2F1}[2,2+m,3+m,1+\text{Sin}[e+f x]]\,(a+a\,\text{Sin}[e+f x])^{2+m}$$

Result (type 8, 23 leaves):

$$\int \text{Cot}[e+f x]^3\,(a+a\,\text{Sin}[e+f x])^m\,dx$$

Problem 134: Unable to integrate problem.

$$\int \text{Cot}[e+f x]^5\,(a+a\,\text{Sin}[e+f x])^m\,dx$$

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

$$\frac{(9-m)\,\text{Csc}[e+f x]^3\,(a+a\,\text{Sin}[e+f x])^{3+m}}{12\,a^3\,f}-\frac{\text{Csc}[e+f x]^4\,(a+a\,\text{Sin}[e+f x])^{3+m}}{4\,a^3\,f}-\frac{1}{12\,a^3\,f\,(3+m)}$$
$$(12-9\,m+m^2)\,\text{Hypergeometric2F1}[3,3+m,4+m,1+\text{Sin}[e+f x]]\,(a+a\,\text{Sin}[e+f x])^{3+m}$$

Result (type 8, 23 leaves):

$$\int \text{Cot}[e+f x]^5\,(a+a\,\text{Sin}[e+f x])^m\,dx$$

Problem 135: Unable to integrate problem.

$$\int (a+a\,\text{Sin}[e+f x])^m\,\text{Tan}[e+f x]^4\,dx$$

Optimal (type 5, 311 leaves, 6 steps):

$$\frac{1}{3\,f\,(1-m)\,m}2^{-\frac{3}{2}+m}\left(9-12\,m-7\,m^2+6\,m^3+m^4\right)\text{Hypergeometric2F1}\left[\frac{1}{2},\frac{5}{2}-m,\frac{3}{2},\frac{1}{2}\left(1-\text{Sin}[e+f\,x]\right)\right]$$
$$\text{Sec}[e+f\,x]\left(1-\text{Sin}[e+f\,x]\right)\left(1+\text{Sin}[e+f\,x]\right)^{\frac{1}{2}-m}\left(a+a\,\text{Sin}[e+f\,x]\right)^m-$$
$$\left(\text{Sec}[e+f\,x]\left(a+a\,\text{Sin}[e+f\,x]\right)^{-1+m}\left(a\left(6-m-7\,m^2-m^3\right)-a\left(9-6\,m-8\,m^2-m^3\right)\text{Sin}[e+f\,x]\right)\right)\Big/$$
$$\left(3\,f\,(1-m)\,m\left(1-\text{Sin}[e+f\,x]\right)\right)+\frac{a^2\,\text{Sin}[e+f\,x]\left(a+a\,\text{Sin}[e+f\,x]\right)^{-1+m}\text{Tan}[e+f\,x]}{f\,(1-m)\left(a-a\,\text{Sin}[e+f\,x]\right)}-$$
$$\frac{a^2\,\text{Sin}[e+f\,x]^2\left(a+a\,\text{Sin}[e+f\,x]\right)^{-1+m}\text{Tan}[e+f\,x]}{f\,m\left(a-a\,\text{Sin}[e+f\,x]\right)}$$

Result (type 8, 23 leaves):

$$\int\left(a+a\,\text{Sin}[e+f\,x]\right)^m\text{Tan}[e+f\,x]^4\,dx$$

Problem 136: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int\left(a+a\,\text{Sin}[e+f\,x]\right)^m\text{Tan}[e+f\,x]^2\,dx$$

Optimal (type 5, 157 leaves, 5 steps):

$$\frac{\text{Sec}[e+f\,x]\left(a+a\,\text{Sin}[e+f\,x]\right)^m}{f\,(1-m)\,m}+\frac{1}{f\,(1-m)\,m}$$
$$2^{-\frac{1}{2}+m}\left(1-m-m^2\right)\text{Hypergeometric2F1}\left[-\frac{1}{2},\frac{3}{2}-m,\frac{1}{2},\frac{1}{2}\left(1-\text{Sin}[e+f\,x]\right)\right]\text{Sec}[e+f\,x]$$
$$\left(1+\text{Sin}[e+f\,x]\right)^{\frac{1}{2}-m}\left(a+a\,\text{Sin}[e+f\,x]\right)^m-\frac{\text{Sec}[e+f\,x]\left(a+a\,\text{Sin}[e+f\,x]\right)^{1+m}}{a\,f\,m}$$

Result (type 6, 25 720 leaves): Display of huge result suppressed!

Problem 138: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int\text{Cot}[e+f\,x]^2\left(a+a\,\text{Sin}[e+f\,x]\right)^m dx$$

Optimal (type 6, 89 leaves, 3 steps):

$$\frac{1}{a^2\,f\,(3+2\,m)}2\,\sqrt{2}\,\text{AppellF1}\left[\frac{3}{2}+m,-\frac{1}{2},2,\frac{5}{2}+m,\frac{1}{2}\left(1+\text{Sin}[e+f\,x]\right),1+\text{Sin}[e+f\,x]\right]$$
$$\text{Sec}[e+f\,x]\,\sqrt{1-\text{Sin}[e+f\,x]}\,\left(a+a\,\text{Sin}[e+f\,x]\right)^{2+m}$$

Result (type 6, 47 775 leaves): Display of huge result suppressed!

Problem 139: Unable to integrate problem.

$$\int \text{Cot}[e+f x]^4 \left(a+a \,\text{Sin}[e+f x]\right)^m dx$$

Optimal (type 6, 89 leaves, 3 steps):

$$\frac{1}{a^3 f (5+2 m)} 4 \sqrt{2} \,\text{AppellF1}\left[\frac{5}{2}+m, -\frac{3}{2}, 4, \frac{7}{2}+m, \frac{1}{2} \left(1+\text{Sin}[e+f x]\right), 1+\text{Sin}[e+f x]\right] \text{Sec}[e+f x] \sqrt{1-\text{Sin}[e+f x]} \left(a+a \,\text{Sin}[e+f x]\right)^{3+m}$$

Result (type 8, 23 leaves):

$$\int \text{Cot}[e+f x]^4 \left(a+a \,\text{Sin}[e+f x]\right)^m dx$$

Problem 158: Result more than twice size of optimal antiderivative.

$$\int \text{Cot}[c+d x]^4 \left(a+b \,\text{Sin}[c+d x]\right)^2 dx$$

Optimal (type 3, 133 leaves, 13 steps):

$$a^2 x-\frac{3 b^2 x}{2}+\frac{3 a b \,\text{ArcTanh}[\text{Cos}[c+d x]]}{d}-\frac{3 a b \,\text{Cos}[c+d x]}{d}+\frac{a^2 \,\text{Cot}[c+d x]}{d}-\frac{3 b^2 \,\text{Cot}[c+d x]}{2 d}+\frac{b^2 \,\text{Cos}[c+d x]^2 \,\text{Cot}[c+d x]}{2 d}-\frac{a b \,\text{Cos}[c+d x] \,\text{Cot}[c+d x]^2}{d}-\frac{a^2 \,\text{Cot}[c+d x]^3}{3 d}$$

Result (type 3, 293 leaves):

$$\frac{\left(2 a^2-3 b^2\right) (c+d x)}{2 d}-\frac{2 a b \,\text{Cos}[c+d x]}{d}+\frac{\left(4 a^2 \,\text{Cos}\left[\frac{1}{2} (c+d x)\right]-3 b^2 \,\text{Cos}\left[\frac{1}{2} (c+d x)\right]\right) \text{Csc}\left[\frac{1}{2} (c+d x)\right]}{6 d}-\frac{a b \,\text{Csc}\left[\frac{1}{2} (c+d x)\right]^2}{4 d}-\frac{a^2 \,\text{Cot}\left[\frac{1}{2} (c+d x)\right] \text{Csc}\left[\frac{1}{2} (c+d x)\right]^2}{24 d}+\frac{3 a b \,\text{Log}\left[\text{Cos}\left[\frac{1}{2} (c+d x)\right]\right]}{d}-\frac{3 a b \,\text{Log}\left[\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right]}{d}+\frac{a b \,\text{Sec}\left[\frac{1}{2} (c+d x)\right]^2}{4 d}+\frac{\text{Sec}\left[\frac{1}{2} (c+d x)\right] \left(-4 a^2 \,\text{Sin}\left[\frac{1}{2} (c+d x)\right]+3 b^2 \,\text{Sin}\left[\frac{1}{2} (c+d x)\right]\right)}{6 d}-\frac{b^2 \,\text{Sin}[2 (c+d x)]}{4 d}+\frac{a^2 \,\text{Sec}\left[\frac{1}{2} (c+d x)\right]^2 \text{Tan}\left[\frac{1}{2} (c+d x)\right]}{24 d}$$

Problem 175: Result more than twice size of optimal antiderivative.

$$\int \frac{\text{Cot}[c+d x]^5}{a+b \,\text{Sin}[c+d x]} dx$$

Optimal (type 3, 148 leaves, 3 steps):

$$-\frac{b\left(2a^2-b^2\right)\operatorname{Csc}[c+dx]}{a^4 d}+\frac{\left(2a^2-b^2\right)\operatorname{Csc}[c+dx]^2}{2a^3 d}+\frac{b\operatorname{Csc}[c+dx]^3}{3a^2 d}-\frac{\operatorname{Csc}[c+dx]^4}{4ad}+\frac{\left(a^2-b^2\right)^2\operatorname{Log}[\operatorname{Sin}[c+dx]]}{a^5 d}-\frac{\left(a^2-b^2\right)^2\operatorname{Log}[a+b\operatorname{Sin}[c+dx]]}{a^5 d}$$

Result (type 3, 347 leaves):

$$\frac{\left(-11a^2 b\operatorname{Cos}\left[\frac{1}{2}(c+dx)\right]+6b^3\operatorname{Cos}\left[\frac{1}{2}(c+dx)\right]\right)\operatorname{Csc}\left[\frac{1}{2}(c+dx)\right]}{12a^4 d}+\frac{\left(7a^2-4b^2\right)\operatorname{Csc}\left[\frac{1}{2}(c+dx)\right]^2}{32a^3 d}+\frac{b\operatorname{Cot}\left[\frac{1}{2}(c+dx)\right]\operatorname{Csc}\left[\frac{1}{2}(c+dx)\right]^2}{24a^2 d}-\frac{\operatorname{Csc}\left[\frac{1}{2}(c+dx)\right]^4}{64ad}+\frac{\left(a^4-2a^2b^2+b^4\right)\operatorname{Log}[\operatorname{Sin}[c+dx]]}{a^5 d}+\frac{\left(-a^4+2a^2b^2-b^4\right)\operatorname{Log}[a+b\operatorname{Sin}[c+dx]]}{a^5 d}+\frac{\left(7a^2-4b^2\right)\operatorname{Sec}\left[\frac{1}{2}(c+dx)\right]^2}{32a^3 d}-\frac{\operatorname{Sec}\left[\frac{1}{2}(c+dx)\right]^4}{64ad}+\frac{\operatorname{Sec}\left[\frac{1}{2}(c+dx)\right]\left(-11a^2 b\operatorname{Sin}\left[\frac{1}{2}(c+dx)\right]+6b^3\operatorname{Sin}\left[\frac{1}{2}(c+dx)\right]\right)}{12a^4 d}+\frac{b\operatorname{Sec}\left[\frac{1}{2}(c+dx)\right]^2\operatorname{Tan}\left[\frac{1}{2}(c+dx)\right]}{24a^2 d}$$

Problem 179: Result more than twice size of optimal antiderivative.

$$\int\frac{\operatorname{Cot}[c+dx]^4}{a+b\operatorname{Sin}[c+dx]}\,dx$$

Optimal (type 3, 154 leaves, 7 steps):

$$\frac{2\left(a^2-b^2\right)^{3/2}\operatorname{ArcTan}\left[\frac{b+a\operatorname{Tan}\left[\frac{1}{2}(c+dx)\right]}{\sqrt{a^2-b^2}}\right]}{a^4 d}-\frac{b\left(3a^2-2b^2\right)\operatorname{ArcTanh}[\operatorname{Cos}[c+dx]]}{2a^4 d}+\frac{\left(4a^2-3b^2\right)\operatorname{Cot}[c+dx]}{3a^3 d}+\frac{b\operatorname{Cot}[c+dx]\operatorname{Csc}[c+dx]}{2a^2 d}-\frac{\operatorname{Cot}[c+dx]\operatorname{Csc}[c+dx]^2}{3ad}$$

Result (type 3, 350 leaves):

$$\frac{2\left(a^2-b^2\right)^{3/2}\text{ArcTan}\left[\frac{\text{Sec}\left[\frac{1}{2}(c+d x)\right]\left(b\,\text{Cos}\left[\frac{1}{2}(c+d x)\right]+a\,\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)}{\sqrt{a^2-b^2}}\right]}{a^4 d}+$$
$$\frac{\left(4 a^2\,\text{Cos}\left[\frac{1}{2}(c+d x)\right]-3 b^2\,\text{Cos}\left[\frac{1}{2}(c+d x)\right]\right)\text{Csc}\left[\frac{1}{2}(c+d x)\right]}{6 a^3 d}+\frac{b\,\text{Csc}\left[\frac{1}{2}(c+d x)\right]^2}{8 a^2 d}-$$
$$\frac{\text{Cot}\left[\frac{1}{2}(c+d x)\right]\text{Csc}\left[\frac{1}{2}(c+d x)\right]^2}{24 a d}+\frac{\left(-3 a^2 b+2 b^3\right)\text{Log}\left[\text{Cos}\left[\frac{1}{2}(c+d x)\right]\right]}{2 a^4 d}+$$
$$\frac{\left(3 a^2 b-2 b^3\right)\text{Log}\left[\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right]}{2 a^4 d}-\frac{b\,\text{Sec}\left[\frac{1}{2}(c+d x)\right]^2}{8 a^2 d}+$$
$$\frac{\text{Sec}\left[\frac{1}{2}(c+d x)\right]\left(-4 a^2\,\text{Sin}\left[\frac{1}{2}(c+d x)\right]+3 b^2\,\text{Sin}\left[\frac{1}{2}(c+d x)\right]\right)}{6 a^3 d}+$$
$$\frac{\text{Sec}\left[\frac{1}{2}(c+d x)\right]^2\text{Tan}\left[\frac{1}{2}(c+d x)\right]}{24 a d}$$

Problem 186: Result more than twice size of optimal antiderivative.

$$\int\frac{\text{Cot}[c+d x]^5}{\left(a+b\,\text{Sin}[c+d x]\right)^2}\,dx$$

Optimal (type 3, 188 leaves, 3 steps):

$$-\frac{4 b\left(a^2-b^2\right)\text{Csc}[c+d x]}{a^5 d}+\frac{\left(2 a^2-3 b^2\right)\text{Csc}[c+d x]^2}{2 a^4 d}+$$
$$\frac{2 b\,\text{Csc}[c+d x]^3}{3 a^3 d}-\frac{\text{Csc}[c+d x]^4}{4 a^2 d}+\frac{\left(a^4-6 a^2 b^2+5 b^4\right)\text{Log}[\text{Sin}[c+d x]]}{a^6 d}-$$
$$\frac{\left(a^4-6 a^2 b^2+5 b^4\right)\text{Log}[a+b\,\text{Sin}[c+d x]]}{a^6 d}+\frac{\left(a^2-b^2\right)^2}{a^5 d\left(a+b\,\text{Sin}[c+d x]\right)}$$

Result (type 3, 380 leaves):

$$\frac{\left(-11\,a^2\,b\,\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+12\,b^3\,\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\,\text{Csc}\left[\frac{1}{2}\,(c+d\,x)\right]}{6\,a^5\,d}+\frac{\left(7\,a^2-12\,b^2\right)\,\text{Csc}\left[\frac{1}{2}\,(c+d\,x)\right]^2}{32\,a^4\,d}+\frac{b\,\text{Cot}\left[\frac{1}{2}\,(c+d\,x)\right]\,\text{Csc}\left[\frac{1}{2}\,(c+d\,x)\right]^2}{12\,a^3\,d}-\frac{\text{Csc}\left[\frac{1}{2}\,(c+d\,x)\right]^4}{64\,a^2\,d}+\frac{\left(a^4-6\,a^2\,b^2+5\,b^4\right)\,\text{Log}[\text{Sin}[c+d\,x]]}{a^6\,d}+\frac{\left(-a^4+6\,a^2\,b^2-5\,b^4\right)\,\text{Log}[a+b\,\text{Sin}[c+d\,x]]}{a^6\,d}+\frac{\left(7\,a^2-12\,b^2\right)\,\text{Sec}\left[\frac{1}{2}\,(c+d\,x)\right]^2}{32\,a^4\,d}-\frac{\text{Sec}\left[\frac{1}{2}\,(c+d\,x)\right]^4}{64\,a^2\,d}+\frac{\text{Sec}\left[\frac{1}{2}\,(c+d\,x)\right]\,\left(-11\,a^2\,b\,\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]+12\,b^3\,\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)}{6\,a^5\,d}+\frac{(a-b)^2\,(a+b)^2}{a^5\,d\,(a+b\,\text{Sin}[c+d\,x])}+\frac{b\,\text{Sec}\left[\frac{1}{2}\,(c+d\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(c+d\,x)\right]}{12\,a^3\,d}$$

Problem 192: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Tan}[c+d\,x]^5}{(a+b\,\text{Sin}[c+d\,x])^3}\,dx$$

Optimal (type 3, 321 leaves, 5 steps):

$$-\frac{\left(8\,a^2-5\,a\,b-b^2\right)\,\text{Log}[1-\text{Sin}[c+d\,x]]}{16\,(a+b)^5\,d}-\frac{\left(8\,a^2+5\,a\,b-b^2\right)\,\text{Log}[1+\text{Sin}[c+d\,x]]}{16\,(a-b)^5\,d}+\frac{a^3\,\left(a^4+13\,a^2\,b^2+10\,b^4\right)\,\text{Log}[a+b\,\text{Sin}[c+d\,x]]}{\left(a^2-b^2\right)^5\,d}-\frac{a^5}{2\,\left(a^2-b^2\right)^3\,d\,(a+b\,\text{Sin}[c+d\,x])^2}-\frac{a^4\,\left(a^2+5\,b^2\right)}{\left(a^2-b^2\right)^4\,d\,(a+b\,\text{Sin}[c+d\,x])}+\frac{\text{Sec}[c+d\,x]^4\,\left(a\,\left(a^2+3\,b^2\right)-b\,\left(3\,a^2+b^2\right)\,\text{Sin}[c+d\,x]\right)}{4\,\left(a^2-b^2\right)^3\,d}-\frac{\text{Sec}[c+d\,x]^2\,\left(8\,a^3\,\left(a^2+5\,b^2\right)-b\,\left(27\,a^4+22\,a^2\,b^2-b^4\right)\,\text{Sin}[c+d\,x]\right)}{8\,\left(a^2-b^2\right)^4\,d}$$

Result (type 3, 588 leaves):

$$-\frac{2\,i\,\left(a^7+13\,a^5\,b^2+10\,a^3\,b^4\right)\,(c+d\,x)}{(a-b)^5\,(a+b)^5\,d}+\frac{1}{8\,(a-b)^5\,d}$$
$$i\,\left(-8\,a^2-5\,a\,b+b^2\right)\,\text{ArcTan}\Big[\text{Csc}[c+d\,x]\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)$$
$$\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\Big]+\frac{1}{8\,(a+b)^5\,d}\,i\,\left(-8\,a^2+5\,a\,b+b^2\right)\,\text{ArcTan}\Big[$$
$$\text{Csc}[c+d\,x]\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)\Big]+$$
$$\frac{\left(-8\,a^2+5\,a\,b+b^2\right)\,\text{Log}\left[\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2\right]}{16\,(a+b)^5\,d}+$$
$$\frac{\left(-8\,a^2-5\,a\,b+b^2\right)\,\text{Log}\left[\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2\right]}{16\,(a-b)^5\,d}+$$
$$\frac{\left(a^7+13\,a^5\,b^2+10\,a^3\,b^4\right)\,\text{Log}[a+b\,\text{Sin}[c+d\,x]]}{\left(a^2-b^2\right)^5\,d}+$$
$$\frac{1}{16\,(a+b)^3\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4}+$$
$$\frac{-7\,a-b}{16\,(a+b)^4\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]-\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}+$$
$$\frac{1}{16\,(a-b)^3\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^4}+$$
$$\frac{-7\,a+b}{16\,(a-b)^4\,d\,\left(\text{Cos}\left[\frac{1}{2}\,(c+d\,x)\right]+\text{Sin}\left[\frac{1}{2}\,(c+d\,x)\right]\right)^2}-$$
$$\frac{a^5}{2\,(a-b)^3\,(a+b)^3\,d\,(a+b\,\text{Sin}[c+d\,x])^2}-\frac{a^4\,\left(a^2+5\,b^2\right)}{(a-b)^4\,(a+b)^4\,d\,(a+b\,\text{Sin}[c+d\,x])}$$

Problem 193: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

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

Optimal (type 3, 232 leaves, 4 steps):

$$\frac{(2a-b)\,\text{Log}[1-\text{Sin}[c+dx]]}{4\,(a+b)^4\,d}+\frac{(2a+b)\,\text{Log}[1+\text{Sin}[c+dx]]}{4\,(a-b)^4\,d}-\frac{a\,(a^4+8a^2b^2+3b^4)\,\text{Log}[a+b\,\text{Sin}[c+dx]]}{(a^2-b^2)^4\,d}+\frac{a^3}{2\,(a^2-b^2)^2\,d\,(a+b\,\text{Sin}[c+dx])^2}+\frac{a^2\,(a^2+3b^2)}{(a^2-b^2)^3\,d\,(a+b\,\text{Sin}[c+dx])}+\frac{\text{Sec}[c+dx]^2\,(a\,(a^2+3b^2)-b\,(3a^2+b^2)\,\text{Sin}[c+dx])}{2\,(a^2-b^2)^3\,d}$$

Result (type 3, 471 leaves):

$$\frac{2\,i\,(a^5+8a^3b^2+3ab^4)\,(c+dx)}{(a-b)^4\,(a+b)^4\,d}+\frac{1}{2\,(a+b)^4\,d}i\,(2a-b)\,\text{ArcTan}\Big[\text{Csc}[c+dx]\left(\text{Cos}\left[\frac{1}{2}(c+dx)\right]-\text{Sin}\left[\frac{1}{2}(c+dx)\right]\right)\left(\text{Cos}\left[\frac{1}{2}(c+dx)\right]+\text{Sin}\left[\frac{1}{2}(c+dx)\right]\right)\Big]+\frac{1}{2\,(a-b)^4\,d}i\,(2a+b)\,\text{ArcTan}\Big[\text{Csc}[c+dx]\left(\text{Cos}\left[\frac{1}{2}(c+dx)\right]-\text{Sin}\left[\frac{1}{2}(c+dx)\right]\right)\left(\text{Cos}\left[\frac{1}{2}(c+dx)\right]+\text{Sin}\left[\frac{1}{2}(c+dx)\right]\right)\Big]+$$
$$\frac{(2a-b)\,\text{Log}\left[\left(\text{Cos}\left[\frac{1}{2}(c+dx)\right]-\text{Sin}\left[\frac{1}{2}(c+dx)\right]\right)^2\right]}{4\,(a+b)^4\,d}+\frac{(2a+b)\,\text{Log}\left[\left(\text{Cos}\left[\frac{1}{2}(c+dx)\right]+\text{Sin}\left[\frac{1}{2}(c+dx)\right]\right)^2\right]}{4\,(a-b)^4\,d}+\frac{(-a^5-8a^3b^2-3ab^4)\,\text{Log}[a+b\,\text{Sin}[c+dx]]}{(a^2-b^2)^4\,d}+$$
$$\frac{1}{4\,(a+b)^3\,d\left(\text{Cos}\left[\frac{1}{2}(c+dx)\right]-\text{Sin}\left[\frac{1}{2}(c+dx)\right]\right)^2}+\frac{1}{4\,(a-b)^3\,d\left(\text{Cos}\left[\frac{1}{2}(c+dx)\right]+\text{Sin}\left[\frac{1}{2}(c+dx)\right]\right)^2}+\frac{a^3}{2\,(a-b)^2\,(a+b)^2\,d\,(a+b\,\text{Sin}[c+dx])^2}+\frac{a^2\,(a^2+3b^2)}{(a-b)^3\,(a+b)^3\,d\,(a+b\,\text{Sin}[c+dx])}$$

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

$$\int (a+b\,\text{Sin}[e+fx])^3\,(g\,\text{Tan}[e+fx])^p\,dx$$

Optimal (type 5, 271 leaves, 10 steps):

$$\frac{a^3\,\text{Hypergeometric2F1}\left[1,\frac{1+p}{2},\frac{3+p}{2},-\text{Tan}[e+f x]^2\right]\,(g\,\text{Tan}[e+f x])^{1+p}}{f\,g\,(1+p)}+\frac{1}{f\,g\,(2+p)}$$

$$3\,a^2\,b\,\left(\text{Cos}[e+f x]^2\right)^{\frac{1+p}{2}}\,\text{Hypergeometric2F1}\left[\frac{1+p}{2},\frac{2+p}{2},\frac{4+p}{2},\text{Sin}[e+f x]^2\right]$$

$$\text{Sin}[e+f x]\,(g\,\text{Tan}[e+f x])^{1+p}+\frac{1}{f\,g\,(4+p)}b^3\,\left(\text{Cos}[e+f x]^2\right)^{\frac{1+p}{2}}$$

$$\text{Hypergeometric2F1}\left[\frac{1+p}{2},\frac{4+p}{2},\frac{6+p}{2},\text{Sin}[e+f x]^2\right]\,\text{Sin}[e+f x]^3\,(g\,\text{Tan}[e+f x])^{1+p}+$$

$$\frac{1}{f\,g^3\,(3+p)}3\,a\,b^2\,\text{Hypergeometric2F1}\left[2,\frac{3+p}{2},\frac{5+p}{2},-\text{Tan}[e+f x]^2\right]\,(g\,\text{Tan}[e+f x])^{3+p}$$

Result (type 6, 16 820 leaves):

$$\Bigg(\Bigg(\Bigg(\Bigg(a^3\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg)\Bigg/\left((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right.$$

$$\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-$$

$$2\,\Bigg(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(12\,a\,b^2\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg)\Bigg/\left((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right.$$

$$\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$2\,\Bigg(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(12\,a\,b^2\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^p\Bigg)\Bigg/\left((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^3\right.$$
$$\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$2\left(-3\,\text{AppellF1}\left[\frac{3+p}{2},p,4,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)+$$
$$\Bigg(6a^2b(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^p\Bigg)\Bigg/\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right.$$
$$\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)+$$
$$\Bigg(8b^3(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,3,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^p\Bigg)\Bigg/\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^3\right.$$
$$\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,3,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$2\left(-3\,\text{AppellF1}\left[\frac{4+p}{2},p,4,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)-$$
$$\Bigg(8b^3(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,4,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^p\Bigg)\Bigg/\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4\right.$$

$$\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,4,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\left(-4\,\text{AppellF1}\left[\frac{4+p}{2},p,5,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,4,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Bigg)\Bigg)\,\text{Tan}[e+fx]^{-p}\,(g\,\text{Tan}[e+fx])^p$$

$$\Bigg(-\frac{1}{8}b^3\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p-a^3\,\text{Sin}[e+fx]^3\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p+\frac{3}{8}\,i\,b^3\,\text{Sin}[2(e+fx)]\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p+\frac{3}{8}b^3\,\text{Sin}[2(e+fx)]^2\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p-\frac{1}{8}\,i\,b^3\,\text{Sin}[2(e+fx)]^3\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p+\text{Cos}[e+fx]^3\left(a^3\,\text{Cos}[3(e+fx)]\,\text{Tan}[e+fx]^p-i\,a^3\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p\right)+\text{Cos}[2(e+fx)]^3\left(\frac{1}{8}\,i\,b^3\,\text{Cos}[3(e+fx)]\,\text{Tan}[e+fx]^p+\frac{1}{8}b^3\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p\right)+\text{Sin}[e+fx]^2\left(-\frac{3}{2}a^2 b\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p+\frac{3}{2}\,i\,a^2 b\,\text{Sin}[2(e+fx)]\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p\right)+\text{Sin}[e+fx]\left(-\frac{3}{4}a\,b^2\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p+\frac{3}{2}\,i\,a\,b^2\,\text{Sin}[2(e+fx)]\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p+\frac{3}{4}a\,b^2\,\text{Sin}[2(e+fx)]^2\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p\right)+\text{Cos}[2(e+fx)]^2\left(-\frac{3}{8}b^3\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p-\frac{3}{4}a\,b^2\,\text{Sin}[e+fx]\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p+\frac{3}{8}\,i\,b^3\,\text{Sin}[2(e+fx)]\,\text{Sin}[3(e+fx)]\,\text{Tan}[e+fx]^p+\text{Cos}[3(e+fx)]\left(-\frac{3}{8}\,i\,b^3\,\text{Tan}[e+fx]^p-\frac{3}{4}\,i\,a\,b^2\,\text{Sin}[e+fx]\,\text{Tan}[e+fx]^p-\frac{3}{8}b^3\,\text{Sin}[2(e+fx)]\,\text{Tan}[e+fx]^p\right)\right)+\text{Cos}[3(e+fx)]\left(-\frac{1}{8}\,i\,b^3\,\text{Tan}[e+fx]^p-i\,a^3\,\text{Sin}[e+fx]^3\,\text{Tan}[e+fx]^p-\frac{3}{8}b^3\,\text{Sin}[2(e+fx)]\,\text{Tan}[e+fx]^p+\frac{3}{8}\,i\,b^3\,\text{Sin}[2(e+fx)]^2\,\text{Tan}[e+fx]^p+\frac{1}{8}b^3\,\text{Sin}[2(e+fx)]^3\,\text{Tan}[e+fx]^p+\text{Sin}[e+fx]^2\left(-\frac{3}{2}\,i\,a^2 b\,\text{Tan}[e+fx]^p-\frac{3}{2}a^2 b\,\text{Sin}[2(e+fx)]\,\text{Tan}[e+fx]^p\right)+\text{Sin}[e+fx]\left(-\frac{3}{4}\,i\,a\,b^2\,\text{Tan}[e+fx]^p-\frac{3}{2}a\,b^2\,\text{Sin}[2(e+fx)]\,\text{Tan}[e+fx]^p+\right.\right.$$

$$\frac{3}{4} i\, a\, b^2 \text{Sin}[2 (e+f x)]^2 \text{Tan}[e+f x]^p)) + \text{Cos}[e+f x]^2$$

$$(\frac{3}{2} a^2 b\, \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p + 3 a^3 \text{Sin}[e+f x]\, \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p -$$

$$\frac{3}{2} i\, a^2 b\, \text{Sin}[2 (e+f x)]\, \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p +$$

$$\text{Cos}[3 (e+f x)]\, (\frac{3}{2} i\, a^2 b\, \text{Tan}[e+f x]^p + 3 i\, a^3 \text{Sin}[e+f x]\, \text{Tan}[e+f x]^p +$$

$$\frac{3}{2} a^2 b\, \text{Sin}[2 (e+f x)]\, \text{Tan}[e+f x]^p) + \text{Cos}[2 (e+f x)]$$

$$(-\frac{3}{2} i\, a^2 b\, \text{Cos}[3 (e+f x)]\, \text{Tan}[e+f x]^p - \frac{3}{2} a^2 b\, \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p)) +$$

$$\text{Cos}[e+f x]\, (\frac{3}{4} i\, a\, b^2 \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p + 3 i\, a^3 \text{Sin}[e+f x]^2 \text{Sin}[3 (e+f x)]$$

$$\text{Tan}[e+f x]^p + \frac{3}{2} a\, b^2 \text{Sin}[2 (e+f x)]\, \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p -$$

$$\frac{3}{4} i\, a\, b^2 \text{Sin}[2 (e+f x)]^2 \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p + \text{Cos}[2 (e+f x)]^2$$

$$(-\frac{3}{4} a\, b^2 \text{Cos}[3 (e+f x)]\, \text{Tan}[e+f x]^p + \frac{3}{4} i\, a\, b^2 \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p) +$$

$$\text{Sin}[e+f x]\, (3 i\, a^2 b\, \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p +$$

$$3 a^2 b\, \text{Sin}[2 (e+f x)]\, \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p) +$$

$$\text{Cos}[3 (e+f x)]\, (-\frac{3}{4} a\, b^2 \text{Tan}[e+f x]^p - 3 a^3 \text{Sin}[e+f x]^2 \text{Tan}[e+f x]^p +$$

$$\frac{3}{2} i\, a\, b^2 \text{Sin}[2 (e+f x)]\, \text{Tan}[e+f x]^p + \frac{3}{4} a\, b^2 \text{Sin}[2 (e+f x)]^2 \text{Tan}[e+f x]^p +$$

$$\text{Sin}[e+f x]\, (-3 a^2 b\, \text{Tan}[e+f x]^p + 3 i\, a^2 b\, \text{Sin}[2 (e+f x)]\, \text{Tan}[e+f x]^p)) +$$

$$\text{Cos}[2 (e+f x)]\, (-\frac{3}{2} i\, a\, b^2 \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p - 3 i\, a^2 b\, \text{Sin}[e+f x]$$

$$\text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p - \frac{3}{2} a\, b^2 \text{Sin}[2 (e+f x)]\, \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p +$$

$$\text{Cos}[3 (e+f x)]\, (\frac{3}{2} a\, b^2 \text{Tan}[e+f x]^p + 3 a^2 b\, \text{Sin}[e+f x]\, \text{Tan}[e+f x]^p -$$

$$\frac{3}{2} i\, a\, b^2 \text{Sin}[2 (e+f x)]\, \text{Tan}[e+f x]^p))) + \text{Cos}[2 (e+f x)]$$

$$(\frac{3}{8} b^3 \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p + \frac{3}{2} a^2 b\, \text{Sin}[e+f x]^2 \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p -$$

$$\frac{3}{4} i\, b^3 \text{Sin}[2 (e+f x)]\, \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p -$$

$$\frac{3}{8} b^3 \text{Sin}[2 (e+f x)]^2 \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p +$$

$$\text{Sin}[e+f x]\, (\frac{3}{2} a\, b^2 \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p -$$

$$\frac{3}{2} i\, a\, b^2 \text{Sin}[2 (e+f x)]\, \text{Sin}[3 (e+f x)]\, \text{Tan}[e+f x]^p) +$$

$$\text{Cos}\left[3\,(e+f\,x)\right]\left(\frac{3}{8}\,i\,b^3\,\text{Tan}[e+f\,x]^p+\frac{3}{2}\,i\,a^2\,b\,\text{Sin}[e+f\,x]^2\,\text{Tan}[e+f\,x]^p+\right.$$

$$\frac{3}{4}\,b^3\,\text{Sin}\left[2\,(e+f\,x)\right]\,\text{Tan}[e+f\,x]^p-\frac{3}{8}\,i\,b^3\,\text{Sin}\left[2\,(e+f\,x)\right]^2\,\text{Tan}[e+f\,x]^p+$$

$$\left.\text{Sin}[e+f\,x]\left(\frac{3}{2}\,i\,a\,b^2\,\text{Tan}[e+f\,x]^p+\frac{3}{2}\,a\,b^2\,\text{Sin}\left[2\,(e+f\,x)\right]\,\text{Tan}[e+f\,x]^p\right)\right)\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Bigg(f\,\Bigg(-\Bigg(\Bigg(a^3\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^p\Bigg)\Bigg/$$

$$\left((1+p)\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\right.\right.\right.$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]-2\left(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\right.\right.$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]-p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\right.$$

$$\left.\left.\left.\left.\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right)\Bigg)+$$

$$\Bigg(a^3\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^p\Bigg)\Bigg/\left(2\,(1+p)\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right.$$

$$\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]-\right.$$

$$2\left(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]-\right.$$

$$\left.p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right)+\Bigg(a^3\,(3+p)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]$$

$$\left(-\frac{1}{3+p}(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},p,2,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+\frac{1}{3+p}p\,(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},1+p,1,\right.$$

$$\left.\left.1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg) \Big/ \left((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right.$$

$$\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2}, p, 1, \frac{3+p}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] - 2\left(\text{AppellF1}\left[\frac{3+p}{2}, p, 2, \frac{5+p}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] - p\,\text{AppellF1}\left[\frac{3+p}{2}, 1+p, 1, \frac{5+p}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Bigg) -$$

$$\Bigg(24\, a\, b^2\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2}, p, 2, \frac{3+p}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg) \Big/ \left((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^3\right.$$

$$\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2}, p, 2, \frac{3+p}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2\left(-2\,\text{AppellF1}\left[\frac{3+p}{2}, p, 3, \frac{5+p}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + p\,\text{AppellF1}\left[\frac{3+p}{2}, 1+p, 2, \frac{5+p}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Bigg) +$$

$$\Bigg(6\, a\, b^2\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2}, p, 2, \frac{3+p}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg) \Big/ \left((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right.$$

$$\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2}, p, 2, \frac{3+p}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2\left(-2\,\text{AppellF1}\left[\frac{3+p}{2}, p, 3, \frac{5+p}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + p\,\text{AppellF1}\left[\frac{3+p}{2}, 1+p, 2, \frac{5+p}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Bigg) +$$

$$\Bigg(12\, a\, b^2\,(3+p)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(-\frac{1}{3+p}2\,(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2}, p, 3, 1+\frac{3+p}{2},\right.\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$

$$\frac{1}{3+p}p(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},1+p,2,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg)\Bigg/\left((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right.$$

$$\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$2\left(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+$$

$$\left(36\,a\,b^2(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg)\Bigg/\left((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^4\right.$$

$$\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$2\left(-3\,\text{AppellF1}\left[\frac{3+p}{2},p,4,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)-$$

$$\left(6\,a\,b^2(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg)\Bigg/\left((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^3\right.$$

$$\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$2\left(-3\,\text{AppellF1}\left[\frac{3+p}{2},p,4,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big)-$$

$$\Bigg(12\,a\,b^2\,(3+p)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]\,\Bigg(-\frac{1}{3+p}3\,(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},\,p,\,4,\,1+\frac{3+p}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$

$$\frac{1}{3+p}p\,(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},\,1+p,\,3,\,1+\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Bigg)$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^p\Bigg)\Bigg/\left((1+p)\,\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^3\right.$$

$$\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,3,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$2\,\Bigg(-3\,\text{AppellF1}\left[\frac{3+p}{2},\,p,\,4,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},\,1+p,\,3,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(12\,a^2\,b\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^3$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^p\Bigg)\Bigg/\left((2+p)\,\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^3\right.$$

$$\Bigg((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$2\,\Bigg(-2\,\text{AppellF1}\left[\frac{4+p}{2},\,p,\,3,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$p\,\text{AppellF1}\left[\frac{4+p}{2},\,1+p,\,2,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(6\,a^2\,b\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg/\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right.$$
$$\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+$$
$$\left(6\,a^2\,b\,(4+p)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left(-\frac{1}{4+p}2\,(2+p)\,\text{AppellF1}\left[1+\frac{2+p}{2},p,3,1+\frac{4+p}{2},\right.\right.\right.$$
$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$
$$\frac{1}{4+p}p\,(2+p)\,\text{AppellF1}\left[1+\frac{2+p}{2},1+p,2,1+\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)$$
$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg/\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right.$$
$$\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)-$$
$$\left(24\,b^3\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,3,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$
$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^3$$
$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg/\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^4\right.$$
$$\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,3,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$2\left(-3\,\text{AppellF1}\left[\frac{4+p}{2},p,4,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)+$$

$$\Big(8 b^3 (4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,3,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg)\Bigg/\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^3\right.$$

$$\Big((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,3,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$2\Big(-3\,\text{AppellF1}\left[\frac{4+p}{2},p,4,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$p\,\text{AppellF1}\Big[\frac{4+p}{2},1+p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)+$$

$$\Big(8 b^3 (4+p)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big(-\frac{1}{4+p}3(2+p)\,\text{AppellF1}\Big[1+\frac{2+p}{2},p,4,1+\frac{4+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$

$$\frac{1}{4+p}p(2+p)\,\text{AppellF1}\Big[1+\frac{2+p}{2},1+p,3,1+\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big)$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p\Bigg)\Bigg/\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^3\right.$$

$$\Big((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,3,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$2\Big(-3\,\text{AppellF1}\left[\frac{4+p}{2},p,4,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$p\,\text{AppellF1}\Big[\frac{4+p}{2},1+p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)+$$

$$\Big(32 b^3 (4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,4,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^3$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^p\Bigg/\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^5\right.$$
$$\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,4,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$2\left(-4\,\text{AppellF1}\left[\frac{4+p}{2},p,5,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,4,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)-$$

$$\left(8\,b^3\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,4,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]$$
$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^p\Bigg/\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4\right.$$
$$\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,4,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$2\left(-4\,\text{AppellF1}\left[\frac{4+p}{2},p,5,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,4,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)-$$

$$\left(8\,b^3\,(4+p)\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(-\frac{1}{4+p}4\,(2+p)\,\text{AppellF1}\left[1+\frac{2+p}{2},p,5,1+\frac{4+p}{2},\right.\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$
$$\frac{1}{4+p}p\,(2+p)\,\text{AppellF1}\left[1+\frac{2+p}{2},1+p,4,1+\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)$$
$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^p\Bigg/\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4\right.$$
$$\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,4,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$2\left(-4\,\text{AppellF1}\left[\frac{4+p}{2},p,5,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,4,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)+$$

$$\Bigg(a^3 p (3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-1+p}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}\right)\Bigg)\Big/$$

$$\Bigg((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)$$

$$\Big((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-$$

$$2\Big(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Big)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Bigg)+$$

$$\Bigg(12\,a\,b^2 p (3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-1+p}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}\right)\Bigg)\Big/$$

$$\Bigg((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2$$

$$\Big((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$2\Big(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Big)\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Bigg)-$$

$$\Bigg(12\,a\,b^2 p (3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-1+p}$$

$$\left(\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}\right)\right)\Big/$$

$$\left((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^3\right.$$

$$\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$2\left(-3\,\text{AppellF1}\left[\frac{3+p}{2},p,4,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+$$

$$\left(6\,a^2\,b\,p\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-1+p}$$

$$\left(\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}\right)\right)\Big/$$

$$\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right.$$

$$\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+$$

$$\left(8\,b^3\,p\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,3,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-1+p}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)}\right)\Bigg)\Bigg/$$

$$\Bigg(\left(2+p\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^3$$

$$\Bigg(\left(4+p\right)\text{AppellF1}\left[\frac{2+p}{2},p,3,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]+$$

$$2\Bigg(-3\,\text{AppellF1}\left[\frac{4+p}{2},p,4,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]+$$

$$p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(8\,b^3\,p\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,4,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]$$

$$\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}\right)^{-1+p}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)}\right)\Bigg)\Bigg/$$

$$\Bigg(\left(2+p\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^4$$

$$\Bigg(\left(4+p\right)\text{AppellF1}\left[\frac{2+p}{2},p,4,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]+$$

$$2\Bigg(-4\,\text{AppellF1}\left[\frac{4+p}{2},p,5,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]+$$

$$p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,4,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(a^3\left(3+p\right)\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]$$

$$\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}\right)^{p}$$

$$\Bigg(-2\Bigg(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]-$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\Bigg)$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+\left(3+p\right)\left(-\frac{1}{3+p}\left(1+p\right)\text{AppellF1}\left[1+\frac{1+p}{2},\right.\right.$$

$$p,\ 2,\ 1+\frac{3+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (e+f\ x)\right]^2\ \text{Tan}\Big[$$

$$\frac{1}{2}\ (e+f\ x)\Big]+\frac{1}{3+p}p\ (1+p)\ \text{AppellF1}\Big[1+\frac{1+p}{2},\ 1+p,\ 1,\ 1+\frac{3+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (e+f\ x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]\Big)-$$

$$2\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\ \Big(-\frac{1}{5+p}2\ (3+p)\ \text{AppellF1}\Big[1+\frac{3+p}{2},\ p,\ 3,\ 1+\frac{5+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (e+f\ x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]+$$

$$\frac{1}{5+p}p\ (3+p)\ \text{AppellF1}\Big[1+\frac{3+p}{2},\ 1+p,\ 2,\ 1+\frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (e+f\ x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]-$$

$$p\ \Big(-\frac{1}{5+p}(3+p)\ \text{AppellF1}\Big[1+\frac{3+p}{2},\ 1+p,\ 2,\ 1+\frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (e+f\ x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]+\frac{1}{5+p}$$

$$(1+p)\ (3+p)\ \text{AppellF1}\Big[1+\frac{3+p}{2},\ 2+p,\ 1,\ 1+\frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (e+f\ x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]\Big)\Big)\Big)\Big)\Big/$$

$$\Big(\ (1+p)\ \left(1+\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\right)\ \Big(\ (3+p)\ \text{AppellF1}\Big[\frac{1+p}{2},\ p,\ 1,\ \frac{3+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]-2\ \Big(\text{AppellF1}\Big[\frac{3+p}{2},\ p,\ 2,\ \frac{5+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]-p\ \text{AppellF1}\Big[\frac{3+p}{2},\ 1+p,\ 1,$$

$$\frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]\Big)\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big)^2\Big)-$$

$$\Big(12\ a\ b^2\ (3+p)\ \text{AppellF1}\Big[\frac{1+p}{2},\ p,\ 2,\ \frac{3+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]$$

$$\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]\ \left(-\frac{\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]}{-1+\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2}\right)^p$$

$$\Big(2\ \Big(-2\ \text{AppellF1}\Big[\frac{3+p}{2},\ p,\ 3,\ \frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]+$$

$$p\ \text{AppellF1}\Big[\frac{3+p}{2},\ 1+p,\ 2,\ \frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]\Big)$$

$$\text{Sec}\left[\frac{1}{2}\ (e+f\ x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]+(3+p)\ \Big(-\frac{1}{3+p}2\ (1+p)\ \text{AppellF1}\Big[1+\frac{1+p}{2},$$

$$p,\ 3,\ 1+\frac{3+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\ x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (e+f\ x)\right]^2\ \text{Tan}\Big[$$

$$\frac{1}{2}\left(e+f x\right)\Big]+\frac{1}{3+p}p\left(1+p\right)\text{AppellF1}\Big[1+\frac{1+p}{2},1+p,2,1+\frac{3+p}{2},$$
$$\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2,-\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Big]\text{Sec}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\Big)+$$
$$2\,\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Bigg(-2\left(-\frac{1}{5+p}3\left(3+p\right)\text{AppellF1}\Big[1+\frac{3+p}{2},p,4,1+\frac{5+p}{2},\right.$$
$$\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2,-\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Big]\text{Sec}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]+$$
$$\frac{1}{5+p}p\left(3+p\right)\text{AppellF1}\Big[1+\frac{3+p}{2},1+p,3,1+\frac{5+p}{2},\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2,$$
$$\left.-\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Big]\text{Sec}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right)+$$
$$p\left(-\frac{1}{5+p}2\left(3+p\right)\text{AppellF1}\Big[1+\frac{3+p}{2},1+p,3,1+\frac{5+p}{2},\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2,\right.$$
$$-\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Big]\text{Sec}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]+\frac{1}{5+p}$$
$$\left(1+p\right)\left(3+p\right)\text{AppellF1}\Big[1+\frac{3+p}{2},2+p,2,1+\frac{5+p}{2},\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2,$$
$$\left.\left.-\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Big]\text{Sec}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\right)\right)\Bigg)\Bigg)\Bigg/$$
$$\Bigg(\left(1+p\right)\left(1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\right)^2\Bigg(\left(3+p\right)\text{AppellF1}\Big[\frac{1+p}{2},p,2,\frac{3+p}{2},$$
$$\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2,-\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Big]+2\Bigg(-2\,\text{AppellF1}\Big[\frac{3+p}{2},p,3,\frac{5+p}{2},$$
$$\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2,-\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Big]+p\,\text{AppellF1}\Big[\frac{3+p}{2},1+p,2,$$
$$\frac{5+p}{2},\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2,-\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Big]\Bigg)\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Bigg)^2\Bigg)+$$
$$\Bigg(12\,a\,b^2\left(3+p\right)\text{AppellF1}\Big[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2,-\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Big]$$
$$\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]\left(-\frac{\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]}{-1+\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2}\right)^p$$
$$\Bigg(2\left(-3\,\text{AppellF1}\Big[\frac{3+p}{2},p,4,\frac{5+p}{2},\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2,-\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Big]+\right.$$
$$\left.p\,\text{AppellF1}\Big[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2,-\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Big]\right)$$
$$\text{Sec}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]+\left(3+p\right)\left(-\frac{1}{3+p}3\left(1+p\right)\text{AppellF1}\Big[1+\frac{1+p}{2},\right.$$
$$p,4,1+\frac{3+p}{2},\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2,-\text{Tan}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\Big]\text{Sec}\Big[\frac{1}{2}\left(e+f x\right)\Big]^2\text{Tan}\Big[$$
$$\frac{1}{2}\left(e+f x\right)\Big]+\frac{1}{3+p}p\left(1+p\right)\text{AppellF1}\Big[1+\frac{1+p}{2},1+p,3,1+\frac{3+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big) +$$

$$2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(-3\left(-\frac{1}{5+p}4\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2}, p, 5, 1+\frac{5+p}{2},\right.\right.\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right] +$$

$$\frac{1}{5+p}p\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2}, 1+p, 4, 1+\frac{5+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big) +$$

$$p\left(-\frac{1}{5+p}3\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2}, 1+p, 4, 1+\frac{5+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right] + \frac{1}{5+p}$$

$$(1+p)\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2}, 2+p, 3, 1+\frac{5+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\Big) \Big/$$

$$\left((1+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^3\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2}, p, 3, \frac{3+p}{2},\right.\right.\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big] + 2\left(-3\,\text{AppellF1}\left[\frac{3+p}{2}, p, 4, \frac{5+p}{2},\right.\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big] + p\,\text{AppellF1}\left[\frac{3+p}{2}, 1+p, 3,\right.$$

$$\left.\left.\left.\frac{5+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\Big) -$$

$$\left(6\,a^2\,b\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2}, p, 2, \frac{4+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^p$$

$$\left(2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2}, p, 3, \frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] +\right.\right.$$

$$\left.p\,\text{AppellF1}\left[\frac{4+p}{2}, 1+p, 2, \frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right] + (4+p)\left(-\frac{1}{4+p}2\,(2+p)\,\text{AppellF1}\left[1+\frac{2+p}{2},\right.\right.$$

$$p, 3, 1+\frac{4+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\Big[$$

$$\frac{1}{2}(e+fx)\Big] + \frac{1}{4+p}p\,(2+p)\,\text{AppellF1}\left[1+\frac{2+p}{2}, 1+p, 2, 1+\frac{4+p}{2},\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big) +$$

$$2\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\left(-2\left(-\frac{1}{6+p}3\,(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},\,p,\,4,\,1+\frac{6+p}{2},\right.\right.\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+$$

$$\frac{1}{6+p}p\,(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},\,1+p,\,3,\,1+\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\right.$$

$$\left.\left.-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)+$$

$$p\left(-\frac{1}{6+p}2\,(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},\,1+p,\,3,\,1+\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+\frac{1}{6+p}$$

$$(1+p)\,(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},\,2+p,\,2,\,1+\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\right.$$

$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)\right)\right)\right)\Big/$$

$$\left(\left(2+p\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)^2\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\right.\right.\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},\,p,\,3,\,\frac{6+p}{2},\right.\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+p\,\text{AppellF1}\left[\frac{4+p}{2},\,1+p,\,2,\right.$$

$$\left.\left.\left.\left.\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)^2\right)-$$

$$\left(8\,b^3\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,3,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\right.$$

$$\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)^p$$

$$\left(2\left(-3\,\text{AppellF1}\left[\frac{4+p}{2},\,p,\,4,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+\right.\right.$$

$$\left.p\,\text{AppellF1}\left[\frac{4+p}{2},\,1+p,\,3,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\right)$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+(4+p)\left(-\frac{1}{4+p}3\left(2+p\right)\text{AppellF1}\left[1+\frac{2+p}{2},\right.\right.$$

$$\left.p,\,4,\,1+\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\text{Tan}\left[\right.$$

$$\left.\frac{1}{2}\left(e+f\,x\right)\right]+\frac{1}{4+p}p\left(2+p\right)\text{AppellF1}\left[1+\frac{2+p}{2},\,1+p,\,3,\,1+\frac{4+p}{2},\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\right)+$$

$$2\,\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\left(-3\left(-\frac{1}{6+p}4\,(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},\,p,\,5,\,1+\frac{6+p}{2},\right.\right.\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$

$$\frac{1}{6+p}p\,(4+p)\,\text{AppellF1}\Big[1+\frac{4+p}{2}, 1+p, 4, 1+\frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)+$$

$$p\left(-\frac{1}{6+p}3\,(4+p)\,\text{AppellF1}\Big[1+\frac{4+p}{2}, 1+p, 4, 1+\frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{6+p}$$

$$(1+p)\,(4+p)\,\text{AppellF1}\Big[1+\frac{4+p}{2}, 2+p, 3, 1+\frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$

$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\right)\Bigg/$$

$$\left((2+p)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^3\left((4+p)\,\text{AppellF1}\Big[\frac{2+p}{2}, p, 3, \frac{4+p}{2},\right.\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+2\left(-3\,\text{AppellF1}\Big[\frac{4+p}{2}, p, 4, \frac{6+p}{2},\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+p\,\text{AppellF1}\Big[\frac{4+p}{2}, 1+p, 3,$$

$$\left.\left.\left.\frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right)+$$

$$\left(8\,b^3\,(4+p)\,\text{AppellF1}\Big[\frac{2+p}{2}, p, 4, \frac{4+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^p$$

$$\left(2\left(-4\,\text{AppellF1}\Big[\frac{4+p}{2}, p, 5, \frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+\right.\right.$$

$$\left.p\,\text{AppellF1}\Big[\frac{4+p}{2}, 1+p, 4, \frac{6+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\right)$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+(4+p)\left(-\frac{1}{4+p}4\,(2+p)\,\text{AppellF1}\Big[1+\frac{2+p}{2},\right.$$

$$p, 5, 1+\frac{4+p}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\Big[$$

$$\frac{1}{2}(e+fx)\Big]+\frac{1}{4+p}p\,(2+p)\,\text{AppellF1}\Big[1+\frac{2+p}{2}, 1+p, 4, 1+\frac{4+p}{2},$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+$$

$$2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(-4\left(-\frac{1}{6+p}5\,(4+p)\,\text{AppellF1}\Big[1+\frac{4+p}{2}, p, 6, 1+\frac{6+p}{2},\right.\right.$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$

$$\frac{1}{6+p} p\ (4+p)\ \text{AppellF1}\left[1+\frac{4+p}{2},\ 1+p,\ 5,\ 1+\frac{6+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right]\ \text{Sec}\left[\frac{1}{2}\ (e+f\,x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]\Bigg) +$$

$$p\ \left(-\frac{1}{6+p} 4\ (4+p)\ \text{AppellF1}\left[1+\frac{4+p}{2},\ 1+p,\ 5,\ 1+\frac{6+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right]\ \text{Sec}\left[\frac{1}{2}\ (e+f\,x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right] + \frac{1}{6+p}$$

$$(1+p)\ (4+p)\ \text{AppellF1}\left[1+\frac{4+p}{2},\ 2+p,\ 4,\ 1+\frac{6+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\right.$$

$$\left.\left.-\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right]\ \text{Sec}\left[\frac{1}{2}\ (e+f\,x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]\right)\Bigg)\Bigg)\Bigg) \Bigg/$$

$$\Bigg((2+p)\ \left(1+\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^4\ \Bigg((4+p)\ \text{AppellF1}\left[\frac{2+p}{2},\ p,\ 4,\ \frac{4+p}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right] + 2\ \Bigg(-4\,\text{AppellF1}\left[\frac{4+p}{2},\ p,\ 5,\ \frac{6+p}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right] + p\,\text{AppellF1}\left[\frac{4+p}{2},\ 1+p,\ 4,\right.$$

$$\left.\frac{6+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right]\Bigg)\ \text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Bigg)^2\Bigg)\Bigg)$$

Problem 204: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int (a+b\,\text{Sin}[e+f\,x])^2\ (g\,\text{Tan}[e+f\,x])^p\,dx$$

Optimal (type 5, 186 leaves, 8 steps):

$$\frac{a^2\,\text{Hypergeometric2F1}\left[1,\ \frac{1+p}{2},\ \frac{3+p}{2},\ -\text{Tan}[e+f\,x]^2\right]\ (g\,\text{Tan}[e+f\,x])^{1+p}}{f\,g\ (1+p)} + \frac{1}{f\,g\ (2+p)}$$

$$2\,a\,b\ \left(\text{Cos}[e+f\,x]^2\right)^{\frac{1+p}{2}}\ \text{Hypergeometric2F1}\left[\frac{1+p}{2},\ \frac{2+p}{2},\ \frac{4+p}{2},\ \text{Sin}[e+f\,x]^2\right]$$

$$\text{Sin}[e+f\,x]\ (g\,\text{Tan}[e+f\,x])^{1+p} + \frac{1}{f\,g^3\ (3+p)}$$

$$b^2\,\text{Hypergeometric2F1}\left[2,\ \frac{3+p}{2},\ \frac{5+p}{2},\ -\text{Tan}[e+f\,x]^2\right]\ (g\,\text{Tan}[e+f\,x])^{3+p}$$

Result (type 6, 10 333 leaves):

$$\left(2^{1+p}\,\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]\ \left(-\frac{\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2}\right)^p\right.$$

$$\left(\left(a^2\ (3+p)\ \text{AppellF1}\left[\frac{1+p}{2},\ p,\ 1,\ \frac{3+p}{2},\ \text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right]\right.\right.$$

$$\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\Bigg)\Bigg/$$

$$\Bigg((1+p)\Bigg((3+p)\,\mathrm{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]-$$

$$2\Bigg(\mathrm{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]-$$

$$p\,\mathrm{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)$$

$$\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)+\Bigg(4\,b^2\,(3+p)\,\mathrm{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\right.$$

$$\left.\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Bigg)\Bigg/$$

$$\Bigg((1+p)\Bigg((3+p)\,\mathrm{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$2\Bigg(-2\,\mathrm{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$p\,\mathrm{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(4\,b^2\,(3+p)\,\mathrm{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)\Bigg/$$

$$\Bigg((1+p)\Bigg((3+p)\,\mathrm{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$2\Bigg(-3\,\mathrm{AppellF1}\left[\frac{3+p}{2},p,4,\frac{5+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$p\,\mathrm{AppellF1}\left[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(4\,a\,b\,(4+p)\,\mathrm{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Bigg)\Bigg/$$

$$\Bigg((2+p)\Bigg((4+p)\,\mathrm{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$2\Bigg(-2\,\mathrm{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$p\,\mathrm{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)$$

$$\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)\Bigg)\,\mathrm{Tan}[e+fx]^{-p}\,(g\,\mathrm{Tan}[e+fx])^p$$

$$\Bigg(-\frac{1}{4}b^2\,\mathrm{Cos}[2(e+fx)]^3\,\mathrm{Tan}[e+fx]^p+\frac{1}{4}\,i\,b^2\,\mathrm{Sin}[2(e+fx)]\,\mathrm{Tan}[e+fx]^p+$$

$$i\,a^2\,\mathrm{Sin}[e+fx]^2\,\mathrm{Sin}[2(e+fx)]\,\mathrm{Tan}[e+fx]^p+$$

$$\frac{1}{2}b^2\,\mathrm{Sin}[2(e+fx)]^2\,\mathrm{Tan}[e+fx]^p-$$

$$\frac{1}{4}\,\mathrm{i}\,b^2\,\mathrm{Sin}[2\,(e+f\,x)]^3\,\mathrm{Tan}[e+f\,x]^p+$$
$$\mathrm{Cos}[e+f\,x]^2\,\left(a^2\,\mathrm{Cos}[2\,(e+f\,x)]\,\mathrm{Tan}[e+f\,x]^p-\mathrm{i}\,a^2\,\mathrm{Sin}[2\,(e+f\,x)]\,\mathrm{Tan}[e+f\,x]^p\right)+$$
$$\mathrm{Cos}[2\,(e+f\,x)]^2$$
$$\left(\frac{1}{2}\,b^2\,\mathrm{Tan}[e+f\,x]^p+a\,b\,\mathrm{Sin}[e+f\,x]\,\mathrm{Tan}[e+f\,x]^p-\frac{1}{4}\,\mathrm{i}\,b^2\,\mathrm{Sin}[2\,(e+f\,x)]\,\mathrm{Tan}[e+f\,x]^p\right)+$$
$$\mathrm{Sin}[e+f\,x]\,\left(\mathrm{i}\,a\,b\,\mathrm{Sin}[2\,(e+f\,x)]\,\mathrm{Tan}[e+f\,x]^p+a\,b\,\mathrm{Sin}[2\,(e+f\,x)]^2\,\mathrm{Tan}[e+f\,x]^p\right)+$$
$$\mathrm{Cos}[2\,(e+f\,x)]\,\left(-\frac{1}{4}\,b^2\,\mathrm{Tan}[e+f\,x]^p-a\,b\,\mathrm{Sin}[e+f\,x]\,\mathrm{Tan}[e+f\,x]^p-\right.$$
$$\left.a^2\,\mathrm{Sin}[e+f\,x]^2\,\mathrm{Tan}[e+f\,x]^p-\frac{1}{4}\,b^2\,\mathrm{Sin}[2\,(e+f\,x)]^2\,\mathrm{Tan}[e+f\,x]^p\right)+$$
$$\mathrm{Cos}[e+f\,x]\,\left(-\mathrm{i}\,a\,b\,\mathrm{Cos}[2\,(e+f\,x)]^2\,\mathrm{Tan}[e+f\,x]^p+a\,b\,\mathrm{Sin}[2\,(e+f\,x)]\,\mathrm{Tan}[e+f\,x]^p+\right.$$
$$2\,a^2\,\mathrm{Sin}[e+f\,x]\,\mathrm{Sin}[2\,(e+f\,x)]\,\mathrm{Tan}[e+f\,x]^p-\mathrm{i}\,a\,b\,\mathrm{Sin}[2\,(e+f\,x)]^2\,\mathrm{Tan}[e+f\,x]^p+$$
$$\left.\left.\left.\mathrm{Cos}[2\,(e+f\,x)]\,\left(\mathrm{i}\,a\,b\,\mathrm{Tan}[e+f\,x]^p+2\,\mathrm{i}\,a^2\,\mathrm{Sin}[e+f\,x]\,\mathrm{Tan}[e+f\,x]^p\right)\right)\right)\right)\Big/$$

$$\left(f\,\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^3\,\left(-\frac{1}{\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^4}\,3\times 2^{1+p}\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right.\right.$$
$$\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\left(-\frac{\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]}{-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^p$$
$$\left(\left(a^2\,(3+p)\,\mathrm{AppellF1}\left[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right.\right.$$
$$\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\right)\Big/\left((1+p)\,\left((3+p)\,\mathrm{AppellF1}\left[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\right.\right.\right.$$
$$\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]-2\,\left(\mathrm{AppellF1}\left[\frac{3+p}{2},\,p,\,2,\,\frac{5+p}{2},\right.\right.$$
$$\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]-p\,\mathrm{AppellF1}\left[\frac{3+p}{2},\,1+p,\,1,\right.$$
$$\left.\left.\left.\left.\frac{5+p}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right)+$$
$$\left(4\,b^2\,(3+p)\,\mathrm{AppellF1}\left[\frac{1+p}{2},\,p,\,2,\,\frac{3+p}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right.$$
$$\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right)\Big/\left((1+p)\,\left((3+p)\,\mathrm{AppellF1}\left[\frac{1+p}{2},\,p,\,2,\,\frac{3+p}{2},\right.\right.\right.$$
$$\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+2\,\left(-2\,\mathrm{AppellF1}\left[\frac{3+p}{2},\,p,\,3,\,\frac{5+p}{2},\right.\right.$$
$$\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+p\,\mathrm{AppellF1}\left[\frac{3+p}{2},\,1+p,\,2,\right.$$
$$\left.\left.\left.\left.\frac{5+p}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)\right)-$$
$$\left(4\,b^2\,(3+p)\,\mathrm{AppellF1}\left[\frac{1+p}{2},\,p,\,3,\,\frac{3+p}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)\Big/$$

$$\left((1+p)\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,3,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(-3\,\text{AppellF1}\left[\frac{3+p}{2},\,p,\,4,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},\,1+p,\,3,\,\frac{5+p}{2},\right.$$

$$\left.\left.\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+$$

$$\left(4\,a\,b\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\Big/\left((2+p)\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\right.\right.\right.$$

$$\left.\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},\,p,\,3,\right.\right.$$

$$\left.\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+p\,\text{AppellF1}\left[\frac{4+p}{2},\,1+p,\right.$$

$$\left.\left.\left.\left.2,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\right)+$$

$$\frac{1}{\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^3}\,2^p\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^p$$

$$\left(\left(a^2\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.\right.$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right)\Big/\left((1+p)\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\right.\right.\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-2\left(\text{AppellF1}\left[\frac{3+p}{2},\,p,\,2,\,\frac{5+p}{2},\right.\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-p\,\text{AppellF1}\left[\frac{3+p}{2},\,1+p,\,1,\right.$$

$$\left.\left.\left.\left.\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+$$

$$\left(4\,b^2\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,2,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\Big/\left((1+p)\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,2,\,\frac{3+p}{2},\right.\right.\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{3+p}{2},\,p,\,3,\,\frac{5+p}{2},\right.\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},\,1+p,\,2,\right.$$

$$\left.\left.\left.\left.\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)-$$

$$\left(4\,b^2\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,3,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\Big/$$

$$\left((1+p)\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,3,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.\right.$$

$$2\left(-3\,\text{AppellF1}\left[\frac{3+p}{2},p,4,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)+\Bigg(4ab(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Bigg)\Bigg/$$

$$\Bigg((2+p)\Bigg((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)\Bigg)+$$

$$\frac{1}{\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^3}2^{1+p}\,p\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(e+fx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-1+p}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)}\right)$$

$$\Bigg(\Bigg(a^2(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\Bigg)\Bigg/\Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]-2\left(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]-p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(4b^2(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Bigg)\Bigg/\Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(4b^2(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)\Bigg/$$

$$\Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$2\ \Big(-3\ \text{AppellF1}\Big[\frac{3+p}{2},\ p,\ 4,\ \frac{5+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]+$$

$$p\ \text{AppellF1}\Big[\frac{3+p}{2},\ 1+p,\ 3,\ \frac{5+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]\Big)\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big)\Big)+$$

$$\Big(4\,a\,b\ (4+p)\ \text{AppellF1}\Big[\frac{2+p}{2},\ p,\ 2,\ \frac{4+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]$$

$$\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]\ \Big(1+\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big)\Big)\Big/$$

$$\Big((2+p)\ \Big((4+p)\ \text{AppellF1}\Big[\frac{2+p}{2},\ p,\ 2,\ \frac{4+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]+$$

$$2\ \Big(-2\ \text{AppellF1}\Big[\frac{4+p}{2},\ p,\ 3,\ \frac{6+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]+$$

$$p\ \text{AppellF1}\Big[\frac{4+p}{2},\ 1+p,\ 2,\ \frac{6+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]\Big)\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big)\Big)\Big)+$$

$$\frac{1}{\left(1+\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^3}\ 2^{1+p}\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]\ \left(-\frac{\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2}\right)^p$$

$$\Big(\Big(2\,a^2\ (3+p)\ \text{AppellF1}\Big[\frac{1+p}{2},\ p,\ 1,\ \frac{3+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]$$

$$\text{Sec}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]\ \Big(1+\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big)\Big)\Big/$$

$$\Big((1+p)\ \Big((3+p)\ \text{AppellF1}\Big[\frac{1+p}{2},\ p,\ 1,\ \frac{3+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]-$$

$$2\ \Big(\text{AppellF1}\Big[\frac{3+p}{2},\ p,\ 2,\ \frac{5+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]-$$

$$p\ \text{AppellF1}\Big[\frac{3+p}{2},\ 1+p,\ 1,\ \frac{5+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]\Big)\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big)\Big)+$$

$$\Big(a^2\ (3+p)\ \Big(-\frac{1}{3+p}(1+p)\ \text{AppellF1}\Big[1+\frac{1+p}{2},\ p,\ 2,\ 1+\frac{3+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]\ \text{Sec}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]+\frac{1}{3+p}p\ (1+p)$$

$$\text{AppellF1}\Big[1+\frac{1+p}{2},\ 1+p,\ 1,\ 1+\frac{3+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]$$

$$\text{Sec}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]\Big)\ \Big(1+\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big)^2\Big)\Big/$$

$$\Big((1+p)\ \Big((3+p)\ \text{AppellF1}\Big[\frac{1+p}{2},\ p,\ 1,\ \frac{3+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]-$$

$$2\ \Big(\text{AppellF1}\Big[\frac{3+p}{2},\ p,\ 2,\ \frac{5+p}{2},\ \text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big]-$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)+$$

$$\left(4b^2(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\Big/$$

$$\Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\Bigg(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(4b^2(3+p)\Bigg(-\frac{1}{3+p}2(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},p,3,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3+p}p(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},1+p,2,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Bigg)\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Bigg)\Big/$$

$$\Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\Bigg(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)-$$

$$\Bigg(4b^2(3+p)\Bigg(-\frac{1}{3+p}3(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},p,4,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3+p}p(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},1+p,3,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Bigg)\Bigg)\Big/$$

$$\Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,3,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\Bigg(-3\,\text{AppellF1}\left[\frac{3+p}{2},p,4,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)+$$

$$\Big(4\,a\,b\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big/$$

$$\Big((2+p)\,\Big((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$2\,\Big(-2\,\text{AppellF1}\left[\frac{4+p}{2},\,p,\,3,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$p\,\text{AppellF1}\Big[\frac{4+p}{2},\,1+p,\,2,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)+$$

$$\Big(2\,a\,b\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\Big(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)\Big/$$

$$\Big((2+p)\,\Big((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$2\,\Big(-2\,\text{AppellF1}\left[\frac{4+p}{2},\,p,\,3,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$p\,\text{AppellF1}\Big[\frac{4+p}{2},\,1+p,\,2,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)+$$

$$\Big(4\,a\,b\,(4+p)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\,\Big(-\frac{1}{4+p}2\,(2+p)\,\text{AppellF1}\Big[1+\frac{2+p}{2},\,p,\,3,\,1+\frac{4+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+$$

$$\frac{1}{4+p}p\,(2+p)\,\text{AppellF1}\Big[1+\frac{2+p}{2},\,1+p,\,2,\,1+\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)$$

$$\Big(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)\Big/\Big((2+p)\,\Big((4+p)\,\text{AppellF1}\Big[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]+2\,\Big(-2\,\text{AppellF1}\Big[\frac{4+p}{2},\,p,\,3,\,\frac{6+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]+p\,\text{AppellF1}\Big[\frac{4+p}{2},\,1+p,\,2,$$

$$\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)-$$

$$\Big(a^2\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\Big(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)^2$$

$$\left(-2\left(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]-\right.\right.$$
$$\left.p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+(3+p)\left(-\frac{1}{3+p}(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},\right.\right.$$
$$p,2,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3+p}p\,(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},1+p,1,1+\frac{3+p}{2},\right.$$
$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)-$$
$$2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(-\frac{1}{5+p}2\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},p,3,1+\frac{5+p}{2},\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$
$$\frac{1}{5+p}p\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},1+p,2,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]-$$
$$p\left(-\frac{1}{5+p}(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},1+p,2,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.$$
$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{5+p}$$
$$(1+p)\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},2+p,1,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\right)\Bigg/$$
$$\left((1+p)\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.\right.$$
$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]-2\left(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.$$
$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]-p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\right.$$
$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right)-$$
$$\left(4\,b^2\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,2,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$
$$\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\left(2\left(-2\,\text{AppellF1}\left[\frac{3+p}{2},p,3,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.\right.$$
$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big)\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$
$$(3+p)\left(-\frac{1}{3+p}2\,(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},p,3,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+\frac{1}{3+p}$$

$$p\left(1+p\right)\ \text{AppellF1}\Big[1+\frac{1+p}{2},\ 1+p,\ 2,\ 1+\frac{3+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\ -\text{Tan}\Big[$$

$$\frac{1}{2}\left(e+f x\right)\Big]^2\Big]\ \text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\Bigg)+2\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2$$

$$\Bigg(-2\ \Bigg(-\frac{1}{5+p}3\ \left(3+p\right)\ \text{AppellF1}\Big[1+\frac{3+p}{2},\ p,\ 4,\ 1+\frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+\frac{1}{5+p}$$

$$p\ \left(3+p\right)\ \text{AppellF1}\Big[1+\frac{3+p}{2},\ 1+p,\ 3,\ 1+\frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\Bigg)+$$

$$p\ \Bigg(-\frac{1}{5+p}2\ \left(3+p\right)\ \text{AppellF1}\Big[1+\frac{3+p}{2},\ 1+p,\ 3,\ 1+\frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+\frac{1}{5+p}$$

$$\left(1+p\right)\ \left(3+p\right)\ \text{AppellF1}\Big[1+\frac{3+p}{2},\ 2+p,\ 2,\ 1+\frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Bigg(\left(1+p\right)\ \Bigg(\left(3+p\right)\ \text{AppellF1}\left[\frac{1+p}{2},\ p,\ 2,\ \frac{3+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]+$$

$$2\ \Bigg(-2\ \text{AppellF1}\left[\frac{3+p}{2},\ p,\ 3,\ \frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]+$$

$$p\ \text{AppellF1}\Big[\frac{3+p}{2},\ 1+p,\ 2,\ \frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Big]\Bigg)\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Bigg)^2\Bigg)+$$

$$\Bigg(4\ b^2\ \left(3+p\right)\ \text{AppellF1}\left[\frac{1+p}{2},\ p,\ 3,\ \frac{3+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]$$

$$\Bigg(2\ \Bigg(-3\ \text{AppellF1}\left[\frac{3+p}{2},\ p,\ 4,\ \frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]+$$

$$p\ \text{AppellF1}\left[\frac{3+p}{2},\ 1+p,\ 3,\ \frac{5+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\Bigg)$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+\left(3+p\right)\ \Bigg(-\frac{1}{3+p}3\ \left(1+p\right)$$

$$\text{AppellF1}\left[1+\frac{1+p}{2},\ p,\ 4,\ 1+\frac{3+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+\frac{1}{3+p}p\ \left(1+p\right)\ \text{AppellF1}\Big[$$

$$1+\frac{1+p}{2},\ 1+p,\ 3,\ 1+\frac{3+p}{2},\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\Big]$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\Bigg)+2\ \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2$$

$$\left(-3\left(-\frac{1}{5+p}4\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},\,p,\,5,\,1+\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+\frac{1}{5+p}$$

$$p\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},\,1+p,\,4,\,1+\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$

$$\left.\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)+$$

$$p\left(-\frac{1}{5+p}3\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},\,1+p,\,4,\,1+\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+\frac{1}{5+p}$$

$$(1+p)\,(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},\,2+p,\,3,\,1+\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$

$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)\right)\right)\right)\Big/$$

$$\left((1+p)\,\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,3,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.\right.$$

$$2\left(-3\,\text{AppellF1}\left[\frac{3+p}{2},\,p,\,4,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},\,1+p,\,3,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$

$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^2\right)-$$

$$\left(4\,a\,b\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right.$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\,\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)$$

$$\left(2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},\,p,\,3,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.\right.$$

$$\left.p\,\text{AppellF1}\left[\frac{4+p}{2},\,1+p,\,2,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\right)$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+(4+p)\,\left(-\frac{1}{4+p}2\,(2+p)\right.$$

$$\text{AppellF1}\left[1+\frac{2+p}{2},\,p,\,3,\,1+\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+\frac{1}{4+p}p\,(2+p)\,\text{AppellF1}\Big[$$

$$1+\frac{2+p}{2},\,1+p,\,2,\,1+\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]$$

$$\left.\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\right)+2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2$$

$$\left(-2\left(-\frac{1}{6+p}3\,(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},\,p,\,4,\,1+\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+\frac{1}{6+p}$$

$$p\,(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},1+p,3,1+\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)+$$
$$p\left(-\frac{1}{6+p}2\,(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},1+p,3,1+\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{6+p}\right.$$
$$\left.(1+p)\,(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},2+p,2,1+\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Bigg)\Bigg)\Bigg)\Bigg/$$
$$\Bigg((2+p)\Bigg((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$
$$2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\Bigg)\Bigg)\Bigg)$$

Problem 205: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int (a+b\,\text{Sin}[e+f x])\,(g\,\text{Tan}[e+f x])^p\,dx$$

Optimal (type 5, 129 leaves, 6 steps):

$$\frac{a\,\text{Hypergeometric2F1}\left[1,\frac{1+p}{2},\frac{3+p}{2},-\text{Tan}[e+f x]^2\right](g\,\text{Tan}[e+f x])^{1+p}}{f g\,(1+p)}+$$
$$\frac{1}{f g\,(2+p)}b\,\left(\text{Cos}[e+f x]^2\right)^{\frac{1+p}{2}}\text{Hypergeometric2F1}\left[\frac{1+p}{2},\frac{2+p}{2},\frac{4+p}{2},\text{Sin}[e+f x]^2\right]\text{Sin}[e+f x]\,(g\,\text{Tan}[e+f x])^{1+p}$$

Result (type 6, 4945 leaves):

$$\left(2\,\text{Cos}\left[\frac{1}{2}(e+f x)\right]^3\text{Sin}\left[\frac{1}{2}(e+f x)\right]\right.$$
$$\left(\left(a\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)\Bigg/\right.$$
$$\left((1+p)\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-\right.\right.$$

$$2\left(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-\right.$$

$$\left.p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+\left(2\,b\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\right.\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big/$$

$$\left((2+p)\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.\right.$$

$$2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$\left.p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)$$

$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\right)\,(g\,\text{Tan}[e+f x])^p$$

$$\left(a\,\text{Cos}[e+f x]^2\,\text{Tan}[e+f x]^p-\frac{1}{2}\,b\,\text{Cos}\left[2\,(e+f x)\right]\,\text{Sin}[e+f x]\,\text{Tan}[e+f x]^p+\right.$$

$$a\,\text{Sin}[e+f x]^2\,\text{Tan}[e+f x]^p+$$

$$\text{Sin}[e+f x]\left(\frac{1}{2}\,b\,\text{Tan}[e+f x]^p-\frac{1}{2}\,i\,b\,\text{Sin}\left[2\,(e+f x)\right]\,\text{Tan}[e+f x]^p\right)+$$

$$\text{Cos}[e+f x]\left(\frac{1}{2}\,i\,b\,\text{Tan}[e+f x]^p-\frac{1}{2}\,i\,b\,\text{Cos}\left[2\,(e+f x)\right]\,\text{Tan}[e+f x]^p+\right.$$

$$\left.\left.\left.\frac{1}{2}\,b\,\text{Sin}\left[2\,(e+f x)\right]\,\text{Tan}[e+f x]^p\right)\right)\right)\Big/$$

$$\left(f\left(2\,p\,\text{Cos}\left[\frac{1}{2}(e+f x)\right]^3\text{Sec}[e+f x]^2\,\text{Sin}\left[\frac{1}{2}(e+f x)\right]\left(\left(a\,(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,\right.\right.\right.\right.\right.$$

$$\left.\left.1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)\Big/$$

$$\left((1+p)\left((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-\right.\right.$$

$$2\left(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-\right.$$

$$\left.p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+\left(2\,b\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\right.\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\Big/$$

$$\left((2+p)\left((4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.\right.$$

$$2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$\left.p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)$$

$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\right)\,\text{Tan}[e+f x]^{-1+p}+\text{Cos}\left[\frac{1}{2}(e+f x)\right]^4$$

$$\Bigg(\Bigg(a\,(3+p)\,\text{AppellF1}\Big[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]$$

$$\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Bigg)\Big/$$

$$\Bigg((1+p)\,\Bigg((3+p)\,\text{AppellF1}\Big[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]-$$

$$2\,\Bigg(\text{AppellF1}\Big[\frac{3+p}{2},\,p,\,2,\,\frac{5+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]-$$

$$p\,\text{AppellF1}\Big[\frac{3+p}{2},\,1+p,\,1,\,\frac{5+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Bigg)$$

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Bigg)\Bigg)+\Bigg(2\,b\,(4+p)\,\text{AppellF1}\Big[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},$$

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Bigg)\Big/$$

$$\Bigg((2+p)\,\Bigg((4+p)\,\text{AppellF1}\Big[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+$$

$$2\,\Bigg(-2\,\text{AppellF1}\Big[\frac{4+p}{2},\,p,\,3,\,\frac{6+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+$$

$$p\,\text{AppellF1}\Big[\frac{4+p}{2},\,1+p,\,2,\,\frac{6+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Bigg)\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Bigg)\Bigg)\Bigg)\,\text{Tan}[e+f\,x]^p-$$

$$3\,\text{Cos}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Sin}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\Bigg(\Bigg(a\,(3+p)\,\text{AppellF1}\Big[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},$$

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Bigg)\Big/$$

$$\Bigg((1+p)\,\Bigg((3+p)\,\text{AppellF1}\Big[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]-$$

$$2\,\Bigg(\text{AppellF1}\Big[\frac{3+p}{2},\,p,\,2,\,\frac{5+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]-$$

$$p\,\text{AppellF1}\Big[\frac{3+p}{2},\,1+p,\,1,\,\frac{5+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Bigg)$$

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Bigg)\Bigg)+\Bigg(2\,b\,(4+p)\,\text{AppellF1}\Big[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},$$

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Bigg)\Big/$$

$$\Bigg((2+p)\,\Bigg((4+p)\,\text{AppellF1}\Big[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+$$

$$2\,\Bigg(-2\,\text{AppellF1}\Big[\frac{4+p}{2},\,p,\,3,\,\frac{6+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+$$

$$p\,\text{AppellF1}\Big[\frac{4+p}{2},\,1+p,\,2,\,\frac{6+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Bigg)$$

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Bigg)\Bigg)\Bigg)\,\text{Tan}[e+f\,x]^p+2\,\text{Cos}\Big[\frac{1}{2}\,(e+f\,x)\Big]^3\,\text{Sin}\Big[\frac{1}{2}\,(e+f\,x)\Big]$$

$$\Bigg(\Bigg(a\,(3+p)\,\text{AppellF1}\Big[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]$$

$$\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big]\Big)\Big/$$

$$\Big(\left(1+p\right)\,\Big(\left(3+p\right)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]-$$

$$2\,\Big(\text{AppellF1}\left[\frac{3+p}{2},\,p,\,2,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]-$$

$$p\,\text{AppellF1}\Big[\frac{3+p}{2},\,1+p,\,1,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)+$$

$$\Big(a\,\left(3+p\right)\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\Big(-\frac{1}{3+p}\left(1+p\right)\,\text{AppellF1}\Big[1+\frac{1+p}{2},\,p,\,2,\,1+\frac{3+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+$$

$$\frac{1}{3+p}p\,\left(1+p\right)\,\text{AppellF1}\Big[1+\frac{1+p}{2},\,1+p,\,1,\,1+\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)\Big)\Big/$$

$$\Big(\left(1+p\right)\,\Big(\left(3+p\right)\,\text{AppellF1}\left[\frac{1+p}{2},\,p,\,1,\,\frac{3+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]-$$

$$2\,\Big(\text{AppellF1}\left[\frac{3+p}{2},\,p,\,2,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]-$$

$$p\,\text{AppellF1}\left[\frac{3+p}{2},\,1+p,\,1,\,\frac{5+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)+\Big(b\,\left(4+p\right)\,\text{AppellF1}\Big[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big/$$

$$\Big(\left(2+p\right)\,\Big(\left(4+p\right)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$2\,\Big(-2\,\text{AppellF1}\left[\frac{4+p}{2},\,p,\,3,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$p\,\text{AppellF1}\Big[\frac{4+p}{2},\,1+p,\,2,\,\frac{6+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)\Big)+$$

$$\Big(2\,b\,\left(4+p\right)\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\,\Big(-\frac{1}{4+p}2\,\left(2+p\right)\,\text{AppellF1}\Big[1+\frac{2+p}{2},\,p,\,3,\,1+\frac{4+p}{2},$$

$$\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+$$

$$\frac{1}{4+p}p\,\left(2+p\right)\,\text{AppellF1}\Big[1+\frac{2+p}{2},\,1+p,\,2,\,1+\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)\Big)\Big/$$

$$\Big(\left(2+p\right)\,\Big(\left(4+p\right)\,\text{AppellF1}\left[\frac{2+p}{2},\,p,\,2,\,\frac{4+p}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$2\left(-2\,\text{AppellF1}\left[\frac{4+p}{2},p,3,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+p\,\text{AppellF1}\left[\frac{4+p}{2},1+p,2,\frac{6+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)-\Bigg(a(3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2$$

$$\Bigg(-2\left(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]-p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+(3+p)\Bigg(-\frac{1}{3+p}(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},p,2,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3+p}p(1+p)\,\text{AppellF1}\left[1+\frac{1+p}{2},1+p,1,1+\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Bigg)-$$

$$2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg(-\frac{1}{5+p}2(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},p,3,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{5+p}p(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},1+p,2,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]-$$

$$p\Bigg(-\frac{1}{5+p}(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},1+p,2,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{5+p}(1+p)(3+p)\,\text{AppellF1}\left[1+\frac{3+p}{2},2+p,1,1+\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Bigg((1+p)\Bigg((3+p)\,\text{AppellF1}\left[\frac{1+p}{2},p,1,\frac{3+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]-2\Big(\text{AppellF1}\left[\frac{3+p}{2},p,2,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]-p\,\text{AppellF1}\left[\frac{3+p}{2},1+p,1,\frac{5+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)^2\Bigg)-$$

$$\Bigg(2b(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},p,2,\frac{4+p}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$
\begin{aligned}
&\text{Tan}[\tfrac{1}{2}(e+f x)]\ \Big(2\ \Big(-2\,\text{AppellF1}[\tfrac{4+p}{2}, p, 3, \tfrac{6+p}{2}, \text{Tan}[\tfrac{1}{2}(e+f x)]^2,\\
&\quad -\text{Tan}[\tfrac{1}{2}(e+f x)]^2] + p\,\text{AppellF1}[\tfrac{4+p}{2}, 1+p, 2, \tfrac{6+p}{2}, \text{Tan}[\tfrac{1}{2}(e+f x)]^2,\\
&\quad -\text{Tan}[\tfrac{1}{2}(e+f x)]^2]\Big)\ \text{Sec}[\tfrac{1}{2}(e+f x)]^2\ \text{Tan}[\tfrac{1}{2}(e+f x)] +\\
&(4+p)\ \Big(-\frac{1}{4+p} 2\ (2+p)\ \text{AppellF1}[1+\tfrac{2+p}{2}, p, 3, 1+\tfrac{4+p}{2}, \text{Tan}[\tfrac{1}{2}(e+f x)]^2,\\
&\quad -\text{Tan}[\tfrac{1}{2}(e+f x)]^2]\ \text{Sec}[\tfrac{1}{2}(e+f x)]^2\ \text{Tan}[\tfrac{1}{2}(e+f x)] + \frac{1}{4+p}\\
&\quad p\ (2+p)\ \text{AppellF1}[1+\tfrac{2+p}{2}, 1+p, 2, 1+\tfrac{4+p}{2}, \text{Tan}[\tfrac{1}{2}(e+f x)]^2,\\
&\quad -\text{Tan}[\tfrac{1}{2}(e+f x)]^2]\ \text{Sec}[\tfrac{1}{2}(e+f x)]^2\ \text{Tan}[\tfrac{1}{2}(e+f x)]\Big) + 2\,\text{Tan}[\tfrac{1}{2}(e+f x)]^2\\
&\quad \Big(-2\ \Big(-\frac{1}{6+p} 3\ (4+p)\ \text{AppellF1}[1+\tfrac{4+p}{2}, p, 4, 1+\tfrac{6+p}{2}, \text{Tan}[\tfrac{1}{2}(e+f x)]^2,\\
&\quad -\text{Tan}[\tfrac{1}{2}(e+f x)]^2]\ \text{Sec}[\tfrac{1}{2}(e+f x)]^2\ \text{Tan}[\tfrac{1}{2}(e+f x)] + \frac{1}{6+p}\\
&\quad p\ (4+p)\ \text{AppellF1}[1+\tfrac{4+p}{2}, 1+p, 3, 1+\tfrac{6+p}{2}, \text{Tan}[\tfrac{1}{2}(e+f x)]^2,\\
&\quad -\text{Tan}[\tfrac{1}{2}(e+f x)]^2]\ \text{Sec}[\tfrac{1}{2}(e+f x)]^2\ \text{Tan}[\tfrac{1}{2}(e+f x)]\Big) +\\
&\quad p\ \Big(-\frac{1}{6+p} 2\ (4+p)\ \text{AppellF1}[1+\tfrac{4+p}{2}, 1+p, 3, 1+\tfrac{6+p}{2}, \text{Tan}[\tfrac{1}{2}(e+f x)]^2,\\
&\quad -\text{Tan}[\tfrac{1}{2}(e+f x)]^2]\ \text{Sec}[\tfrac{1}{2}(e+f x)]^2\ \text{Tan}[\tfrac{1}{2}(e+f x)] + \frac{1}{6+p}\\
&\quad (1+p)\ (4+p)\ \text{AppellF1}[1+\tfrac{4+p}{2}, 2+p, 2, 1+\tfrac{6+p}{2}, \text{Tan}[\tfrac{1}{2}(e+f x)]^2,\\
&\quad -\text{Tan}[\tfrac{1}{2}(e+f x)]^2]\ \text{Sec}[\tfrac{1}{2}(e+f x)]^2\ \text{Tan}[\tfrac{1}{2}(e+f x)]\Big)\Big)\Big)\Big) \Big/\\
&\Big(\Big((2+p)\ \Big((4+p)\ \text{AppellF1}[\tfrac{2+p}{2}, p, 2, \tfrac{4+p}{2}, \text{Tan}[\tfrac{1}{2}(e+f x)]^2, -\text{Tan}[\tfrac{1}{2}(e+f x)]^2] +\\
&\quad 2\ \Big(-2\,\text{AppellF1}[\tfrac{4+p}{2}, p, 3, \tfrac{6+p}{2}, \text{Tan}[\tfrac{1}{2}(e+f x)]^2, -\text{Tan}[\tfrac{1}{2}(e+f x)]^2] +\\
&\quad p\,\text{AppellF1}[\tfrac{4+p}{2}, 1+p, 2, \tfrac{6+p}{2}, \text{Tan}[\tfrac{1}{2}(e+f x)]^2,\\
&\quad -\text{Tan}[\tfrac{1}{2}(e+f x)]^2]\Big)\ \text{Tan}[\tfrac{1}{2}(e+f x)]^2\Big)^2\Big)\Big)\ \text{Tan}[e+f x]^p\Big)\Big)
\end{aligned}
$$

Problem 206: Result more than twice size of optimal antiderivative.

$$\int \frac{(g\,\text{Tan}[e+f x])^p}{a+b\,\text{Sin}[e+f x]}\,dx$$

Optimal (type 6, 284 leaves, 0 steps):

$$\left(a\,g\left(1-\frac{b^2\,\text{Cos}[e+f\,x]^2}{-a^2+b^2}\right)^{\frac{1}{2}(-1+p)}\text{Hypergeometric2F1}\left[\frac{1-p}{2},\frac{1-p}{2},\frac{3-p}{2},\frac{\text{Cos}[e+f\,x]^2-\frac{b^2\,\text{Cos}[e+f\,x]^2}{-a^2+b^2}}{1-\frac{b^2\,\text{Cos}[e+f\,x]^2}{-a^2+b^2}}\right]\left(\text{Sin}[e+f\,x]^2\right)^{\frac{1-p}{2}}\left(g\,\text{Tan}[e+f\,x]\right)^{-1+p}\right)\bigg/\left(\left(a^2-b^2\right)f\,(-1+p)\right)+$$

$$\left(b\,\text{AppellF1}\left[\frac{1-p}{2},-\frac{p}{2},1,\frac{3-p}{2},\text{Cos}[e+f\,x]^2,\frac{b^2\,\text{Cos}[e+f\,x]^2}{-a^2+b^2}\right]\text{Cos}[e+f\,x]\left(\text{Sin}[e+f\,x]^2\right)^{-p/2}\left(g\,\text{Tan}[e+f\,x]\right)^p\right)\bigg/\left(\left(-a^2+b^2\right)f\,(-1+p)\right)$$

Result (type 6, 3354 leaves):

$$\left(\text{Tan}[e+f\,x]^{1+p}\left(g\,\text{Tan}[e+f\,x]\right)^p\left(\frac{\text{Hypergeometric2F1}\left[1,\frac{1+p}{2},\frac{3+p}{2},\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f\,x]^2\right]}{a\,(1+p)}-\frac{\text{Hypergeometric2F1}\left[\frac{1}{2},1+\frac{p}{2},2+\frac{p}{2},-\text{Tan}[e+f\,x]^2\right]\text{Tan}[e+f\,x]}{2\,b+b\,p}-\left(a^2\left(a^2-b^2\right)(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},-\frac{1}{2},1,\frac{4+p}{2},-\text{Tan}[e+f\,x]^2,\frac{\left(-a^2+b^2\right)\text{Tan}[e+f\,x]^2}{a^2}\right]\text{Tan}[e+f\,x]\sqrt{1+\text{Tan}[e+f\,x]^2}\right)\bigg/\left(b\,(2+p)\left(a^2\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},-\frac{1}{2},1,\frac{4+p}{2},-\text{Tan}[e+f\,x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f\,x]^2\right]+\left(-2\left(a^2-b^2\right)\text{AppellF1}\left[\frac{4+p}{2},-\frac{1}{2},2,\frac{6+p}{2},-\text{Tan}[e+f\,x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f\,x]^2\right]+a^2\,\text{AppellF1}\left[\frac{4+p}{2},\frac{1}{2},1,\frac{6+p}{2},-\text{Tan}[e+f\,x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f\,x]^2\right]\right)\text{Tan}[e+f\,x]^2\right)\left(b^2\,\text{Tan}[e+f\,x]^2-a^2\left(1+\text{Tan}[e+f\,x]^2\right)\right)\right)\right)\right)\bigg/$$

$$\left(f\,(a+b\,\text{Sin}[e+f\,x])\left((1+p)\,\text{Sec}[e+f\,x]^2\,\text{Tan}[e+f\,x]^p\right.\right.$$

$$\left(\frac{\text{Hypergeometric2F1}\left[1,\frac{1+p}{2},\frac{3+p}{2},\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f\,x]^2\right]}{a\,(1+p)}-\frac{1}{2\,b+b\,p}\text{Hypergeometric2F1}\left[\frac{1}{2},1+\frac{p}{2},2+\frac{p}{2},-\text{Tan}[e+f\,x]^2\right]\text{Tan}[e+f\,x]-\right.$$

$$\left(a^2\left(a^2-b^2\right)(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},-\frac{1}{2},1,\frac{4+p}{2},-\text{Tan}[e+f\,x]^2,\frac{\left(-a^2+b^2\right)\text{Tan}[e+f\,x]^2}{a^2}\right]\text{Tan}[e+f\,x]\sqrt{1+\text{Tan}[e+f\,x]^2}\right)\bigg/\left(b\,(2+p)\right.$$

$$\Big(a^2\ (4+p)\ \text{AppellF1}\Big[\frac{2+p}{2},\ -\frac{1}{2},\ 1,\ \frac{4+p}{2},\ -\text{Tan}[e+f\,x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)\ \text{Tan}[e+f\,x]^2\Big]\ +$$

$$\Big(-2\ \big(a^2-b^2\big)\ \text{AppellF1}\Big[\frac{4+p}{2},\ -\frac{1}{2},\ 2,\ \frac{6+p}{2},\ -\text{Tan}[e+f\,x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)$$

$$\text{Tan}[e+f\,x]^2\Big]\ +a^2\ \text{AppellF1}\Big[\frac{4+p}{2},\ \frac{1}{2},\ 1,\ \frac{6+p}{2},\ -\text{Tan}[e+f\,x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)$$

$$\text{Tan}[e+f\,x]^2\Big]\Big)\ \text{Tan}[e+f\,x]^2\Big)\ \big(b^2\ \text{Tan}[e+f\,x]^2-a^2\ \big(1+\text{Tan}[e+f\,x]^2\big)\big)\Big)\Big)\ +$$

$$\text{Tan}[e+f\,x]^{1+p}\ \Big(-\frac{1}{2\,b+b\,p}\text{Hypergeometric2F1}\Big[\frac{1}{2},\ 1+\frac{p}{2},\ 2+\frac{p}{2},\ -\text{Tan}[e+f\,x]^2\Big]\ \text{Sec}[e+f\,x]^2\ -$$

$$\frac{1}{2\,b+b\,p}2\ \Big(1+\frac{p}{2}\Big)\ \text{Sec}[e+f\,x]^2$$

$$\Big(-\text{Hypergeometric2F1}\Big[\frac{1}{2},\ 1+\frac{p}{2},\ 2+\frac{p}{2},\ -\text{Tan}[e+f\,x]^2\Big]\ +\ \frac{1}{\sqrt{1+\text{Tan}[e+f\,x]^2}}\Big)\ +$$

$$\Big(a^2\ \big(a^2-b^2\big)\ (4+p)\ \text{AppellF1}\Big[\frac{2+p}{2},\ -\frac{1}{2},\ 1,\ \frac{4+p}{2},\ -\text{Tan}[e+f\,x]^2,$$

$$\frac{\big(-a^2+b^2\big)\ \text{Tan}[e+f\,x]^2}{a^2}\Big]\ \text{Tan}[e+f\,x]\ \big(-2\ a^2\ \text{Sec}[e+f\,x]^2\ \text{Tan}[e+f\,x]\ +$$

$$2\ b^2\ \text{Sec}[e+f\,x]^2\ \text{Tan}[e+f\,x]\big)\ \sqrt{1+\text{Tan}[e+f\,x]^2}\Big)\Big/\ \Big(b\ \big(2+p\big)$$

$$\Big(a^2\ (4+p)\ \text{AppellF1}\Big[\frac{2+p}{2},\ -\frac{1}{2},\ 1,\ \frac{4+p}{2},\ -\text{Tan}[e+f\,x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)\ \text{Tan}[e+f\,x]^2\Big]\ +$$

$$\Big(-2\ \big(a^2-b^2\big)\ \text{AppellF1}\Big[\frac{4+p}{2},\ -\frac{1}{2},\ 2,\ \frac{6+p}{2},\ -\text{Tan}[e+f\,x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)$$

$$\text{Tan}[e+f\,x]^2\Big]\ +a^2\ \text{AppellF1}\Big[\frac{4+p}{2},\ \frac{1}{2},\ 1,\ \frac{6+p}{2},\ -\text{Tan}[e+f\,x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)$$

$$\text{Tan}[e+f\,x]^2\Big]\Big)\ \text{Tan}[e+f\,x]^2\Big)\ \big(b^2\ \text{Tan}[e+f\,x]^2-a^2\ \big(1+\text{Tan}[e+f\,x]^2\big)\big)^2\Big)\ -$$

$$\Big(a^2\ \big(a^2-b^2\big)\ (4+p)\ \text{AppellF1}\Big[\frac{2+p}{2},\ -\frac{1}{2},\ 1,\ \frac{4+p}{2},\ -\text{Tan}[e+f\,x]^2,$$

$$\frac{\big(-a^2+b^2\big)\ \text{Tan}[e+f\,x]^2}{a^2}\Big]\ \text{Sec}[e+f\,x]^2\ \text{Tan}[e+f\,x]^2\Big)\Big/\ \Big(b\ \big(2+p\big)\ \sqrt{1+\text{Tan}[e+f\,x]^2}$$

$$\Big(a^2\ (4+p)\ \text{AppellF1}\Big[\frac{2+p}{2},\ -\frac{1}{2},\ 1,\ \frac{4+p}{2},\ -\text{Tan}[e+f\,x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)\ \text{Tan}[e+f\,x]^2\Big]\ +$$

$$\Big(-2\ \big(a^2-b^2\big)\ \text{AppellF1}\Big[\frac{4+p}{2},\ -\frac{1}{2},\ 2,\ \frac{6+p}{2},\ -\text{Tan}[e+f\,x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)$$

$$\text{Tan}[e+f\,x]^2\Big]\ +a^2\ \text{AppellF1}\Big[\frac{4+p}{2},\ \frac{1}{2},\ 1,\ \frac{6+p}{2},\ -\text{Tan}[e+f\,x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)$$

$$\text{Tan}[e+f x]^2\Big]\Big)\ \text{Tan}[e+f x]^2\Big)\ \left(b^2\,\text{Tan}[e+f x]^2-a^2\left(1+\text{Tan}[e+f x]^2\right)\right)\Big)-$$

$$\Bigg(a^2\left(a^2-b^2\right)(4+p)\,\text{AppellF1}\Big[\frac{2+p}{2},-\frac{1}{2},1,\frac{4+p}{2},-\text{Tan}[e+f x]^2,\frac{\left(-a^2+b^2\right)\text{Tan}[e+f x]^2}{a^2}\Big]\,\text{Sec}[e+f x]^2\sqrt{1+\text{Tan}[e+f x]^2}\Bigg)\Big/\Bigg(b\,(2+p)$$

$$\Bigg(a^2(4+p)\,\text{AppellF1}\Big[\frac{2+p}{2},-\frac{1}{2},1,\frac{4+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\Big]+$$

$$\Bigg(-2\left(a^2-b^2\right)\text{AppellF1}\Big[\frac{4+p}{2},-\frac{1}{2},2,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)$$

$$\text{Tan}[e+f x]^2\Big]+a^2\,\text{AppellF1}\Big[\frac{4+p}{2},\frac{1}{2},1,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)$$

$$\text{Tan}[e+f x]^2\Big]\Bigg)\ \text{Tan}[e+f x]^2\Bigg)\ \left(b^2\,\text{Tan}[e+f x]^2-a^2\left(1+\text{Tan}[e+f x]^2\right)\right)\Bigg)-$$

$$\Bigg(a^2\left(a^2-b^2\right)(4+p)\,\text{Tan}[e+f x]\,\Bigg(\frac{1}{a^2(4+p)}2\left(-a^2+b^2\right)(2+p)\,\text{AppellF1}\Big[1+$$

$$\frac{2+p}{2},-\frac{1}{2},2,1+\frac{4+p}{2},-\text{Tan}[e+f x]^2,\frac{\left(-a^2+b^2\right)\text{Tan}[e+f x]^2}{a^2}\Big]\,\text{Sec}[e+f x]^2$$

$$\text{Tan}[e+f x]+\frac{1}{4+p}(2+p)\,\text{AppellF1}\Big[1+\frac{2+p}{2},\frac{1}{2},1,1+\frac{4+p}{2},-\text{Tan}[e+f x]^2,$$

$$\frac{\left(-a^2+b^2\right)\text{Tan}[e+f x]^2}{a^2}\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\Bigg)\sqrt{1+\text{Tan}[e+f x]^2}\Bigg)\Big/$$

$$\Bigg(b\,(2+p)\,\Bigg(a^2(4+p)\,\text{AppellF1}\Big[\frac{2+p}{2},-\frac{1}{2},1,\frac{4+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)$$

$$\text{Tan}[e+f x]^2\Big]+\Bigg(-2\left(a^2-b^2\right)\text{AppellF1}\Big[\frac{4+p}{2},-\frac{1}{2},2,\frac{6+p}{2},$$

$$-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\Big]+a^2\,\text{AppellF1}\Big[\frac{4+p}{2},\frac{1}{2},$$

$$1,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\Big]\Bigg)\ \text{Tan}[e+f x]^2\Bigg)$$

$$\left(b^2\,\text{Tan}[e+f x]^2-a^2\left(1+\text{Tan}[e+f x]^2\right)\right)\Bigg)+\frac{1}{a}\text{Csc}[e+f x]\ \text{Sec}[e+f x]$$

$$\Bigg(-\text{Hypergeometric2F1}\Big[1,\frac{1+p}{2},\frac{3+p}{2},\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\Big]+$$

$$\frac{1}{1-\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2}\Bigg)+$$

$$\Bigg(a^2\left(a^2-b^2\right)(4+p)\,\text{AppellF1}\Big[\frac{2+p}{2},-\frac{1}{2},1,\frac{4+p}{2},-\text{Tan}[e+f x]^2,$$

$$\frac{\left(-a^2+b^2\right)\text{Tan}[e+f x]^2}{a^2}\Big]\,\text{Tan}[e+f x]\sqrt{1+\text{Tan}[e+f x]^2}\ \Bigg(2\Bigg(-2\left(a^2-b^2\right)$$

$$\text{AppellF1}\left[\frac{4+p}{2},-\frac{1}{2},2,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]+$$
$$a^2\,\text{AppellF1}\left[\frac{4+p}{2},\frac{1}{2},1,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]\Bigg)$$
$$\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+a^2\,(4+p)\left(\frac{1}{4+p}2\left(-1+\frac{b^2}{a^2}\right)(2+p)\right.$$
$$\text{AppellF1}\left[1+\frac{2+p}{2},-\frac{1}{2},2,1+\frac{4+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]$$
$$\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]+\frac{1}{4+p}(2+p)\,\text{AppellF1}\left[1+\frac{2+p}{2},\frac{1}{2},1,1+\frac{4+p}{2},\right.$$
$$\left.\left.-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\right)+$$
$$\text{Tan}[e+f x]^2\left(-2\left(a^2-b^2\right)\left(\frac{1}{6+p}4\left(-1+\frac{b^2}{a^2}\right)(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},\right.\right.\right.$$
$$-\frac{1}{2},3,1+\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\Big]\,\text{Sec}[e+f x]^2$$
$$\text{Tan}[e+f x]+\frac{1}{6+p}(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},\frac{1}{2},2,1+\frac{6+p}{2},\right.$$
$$\left.\left.-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\right)+$$
$$a^2\left(\frac{1}{6+p}2\left(-1+\frac{b^2}{a^2}\right)(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},\frac{1}{2},2,1+\frac{6+p}{2},\right.\right.$$
$$-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\Big]\,\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]-$$
$$\frac{1}{6+p}(4+p)\,\text{AppellF1}\left[1+\frac{4+p}{2},\frac{3}{2},1,1+\frac{6+p}{2},-\text{Tan}[e+f x]^2,\right.$$
$$\left.\left.\left.\left.\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\right)\right)\right)\Bigg)\Bigg/$$
$$\Bigg(b\,(2+p)\left(a^2\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},-\frac{1}{2},1,\frac{4+p}{2},-\text{Tan}[e+f x]^2,\right.\right.$$
$$\left.\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]+\left(-2\left(a^2-b^2\right)\text{AppellF1}\left[\frac{4+p}{2},\right.\right.$$
$$-\frac{1}{2},2,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\Big]+$$
$$a^2\,\text{AppellF1}\left[\frac{4+p}{2},\frac{1}{2},1,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]\Bigg)$$
$$\left.\text{Tan}[e+f x]^2\right)^2\left(b^2\,\text{Tan}[e+f x]^2-a^2\left(1+\text{Tan}[e+f x]^2\right)\right)\Bigg)\Bigg)\Bigg)\Bigg)$$

Problem 207: Result more than twice size of optimal antiderivative.

$$\int \frac{(g\,\text{Tan}[e+f\,x])^p}{(a+b\,\text{Sin}[e+f\,x])^2}\,dx$$

Optimal (type 6, 737 leaves, 0 steps):

$$\left(a^2\,\text{Cos}[e+f\,x]\,\left(1-\text{Cos}[e+f\,x]^2\right)^{\frac{1}{2}(-1+q)}\left(1-\frac{b^2\,\text{Cos}[e+f\,x]^2}{-a^2+b^2}\right)^{-2+\frac{3-q}{2}+\frac{1}{2}(-1+q)}\right.$$
$$\left(\left(2\left(a^2-b^2\right)+b^2\,(1+q)\,\text{Cos}[e+f\,x]^2\right)\text{HurwitzLerchPhi}\left[-\frac{a^2\,\text{Cot}[e+f\,x]^2}{a^2-b^2},\,1,\,\frac{1-q}{2}\right]-\right.$$
$$\left.b^2\,(-1+q)\,\text{Cos}[e+f\,x]^2\,\text{HurwitzLerchPhi}\left[-\frac{a^2\,\text{Cot}[e+f\,x]^2}{a^2-b^2},\,1,\,\frac{3-q}{2}\right]\right)$$
$$\left.\text{Sin}[e+f\,x]\,\left(\text{Sin}[e+f\,x]^2\right)^{\frac{1}{2}(-1-q)}\,(g\,\text{Tan}[e+f\,x])^q\right)\Big/\left(2\left(a^2-b^2\right)^2\left(-a^2+b^2\right)f\right)-$$
$$\left(a^2\,\text{Cos}[e+f\,x]\left(1-\frac{b^2\,\text{Cos}[e+f\,x]^2}{-a^2+b^2}\right)^{\frac{1}{2}(-1+q)}\text{Hypergeometric2F1}\left[\frac{1-q}{2},\,\frac{1-q}{2},\,\frac{3-q}{2},\right.\right.$$
$$\left.\left.\frac{\text{Cos}[e+f\,x]^2-\frac{b^2\,\text{Cos}[e+f\,x]^2}{-a^2+b^2}}{1-\frac{b^2\,\text{Cos}[e+f\,x]^2}{-a^2+b^2}}\right]\text{Sin}[e+f\,x]\,\left(\text{Sin}[e+f\,x]^2\right)^{\frac{1}{2}(-1-q)}\,(g\,\text{Tan}[e+f\,x])^q\right)\Big/$$
$$\left(\left(a^2-b^2\right)^2 f\,(-1+q)\right)+\left(b^2\,\text{Cos}[e+f\,x]\left(1-\frac{b^2\,\text{Cos}[e+f\,x]^2}{-a^2+b^2}\right)^{\frac{1}{2}(-1+q)}\right.$$
$$\text{Hypergeometric2F1}\left[\frac{1-q}{2},\,\frac{1-q}{2},\,\frac{3-q}{2},\,\frac{\text{Cos}[e+f\,x]^2-\frac{b^2\,\text{Cos}[e+f\,x]^2}{-a^2+b^2}}{1-\frac{b^2\,\text{Cos}[e+f\,x]^2}{-a^2+b^2}}\right]$$
$$\left.\text{Sin}[e+f\,x]\,\left(\text{Sin}[e+f\,x]^2\right)^{\frac{1}{2}(-1-q)}\,(g\,\text{Tan}[e+f\,x])^q\right)\Big/\left(\left(a^2-b^2\right)^2 f\,(-1+q)\right)-$$
$$\left(2\,a\,b\,\text{AppellF1}\left[\frac{1-q}{2},\,-\frac{q}{2},\,2,\,\frac{3-q}{2},\,\text{Cos}[e+f\,x]^2,\,\frac{b^2\,\text{Cos}[e+f\,x]^2}{-a^2+b^2}\right]\text{Cos}[e+f\,x]\right.$$
$$\left.\left(\text{Sin}[e+f\,x]^2\right)^{-q/2}\,(g\,\text{Tan}[e+f\,x])^q\right)\Big/\left(\left(a^2-b^2\right)^2 f\,(-1+q)\right)$$

Result (type 6, 3387 leaves):

$$\left(\text{Tan}[e+f\,x]^{1+p}\,(g\,\text{Tan}[e+f\,x])^p\right.$$
$$\left(\frac{1}{a^2\,(1+p)}\left(-\left(a^2+b^2\right)\text{Hypergeometric2F1}\left[1,\,\frac{1+p}{2},\,\frac{3+p}{2},\,\frac{\left(-a^2+b^2\right)\text{Tan}[e+f\,x]^2}{a^2}\right]+\right.\right.$$
$$\left.2\,b^2\,\text{Hypergeometric2F1}\left[2,\,\frac{1+p}{2},\,\frac{3+p}{2},\,\frac{\left(-a^2+b^2\right)\text{Tan}[e+f\,x]^2}{a^2}\right]\right)+$$
$$\left(2\,a^3\,b\,\left(a^2-b^2\right)(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},\,-\frac{1}{2},\,2,\,\frac{4+p}{2},\,-\text{Tan}[e+f\,x]^2,\right.\right.$$

$$\frac{(-a^2+b^2)\,\mathrm{Tan}[e+f x]^2}{a^2}\Big]\ \mathrm{Tan}[e+f x]\ \sqrt{1+\mathrm{Tan}[e+f x]^2}\Bigg)\Bigg/$$

$$\Bigg((2+p)\ \Bigg(a^2\ (4+p)\ \mathrm{AppellF1}\Big[\frac{2+p}{2},\ -\frac{1}{2},\ 2,\ \frac{4+p}{2},\ -\mathrm{Tan}[e+f x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)\ \mathrm{Tan}[e+f x]^2\Big]+$$

$$\Bigg(-4\ (a^2-b^2)\ \mathrm{AppellF1}\Big[\frac{4+p}{2},\ -\frac{1}{2},\ 3,\ \frac{6+p}{2},\ -\mathrm{Tan}[e+f x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)\ \mathrm{Tan}[e+f x]^2\Big]+$$

$$a^2\,\mathrm{AppellF1}\Big[\frac{4+p}{2},\ \frac{1}{2},\ 2,\ \frac{6+p}{2},\ -\mathrm{Tan}[e+f x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)\ \mathrm{Tan}[e+f x]^2\Big]\Bigg)$$

$$\mathrm{Tan}[e+f x]^2\Bigg)\ \Big(b^2\,\mathrm{Tan}[e+f x]^2-a^2\ (1+\mathrm{Tan}[e+f x]^2)\Big)^2\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Bigg((-a^2+b^2)\ f\ (a+b\,\mathrm{Sin}[e+f x])^2\ \Bigg(\frac{1}{-a^2+b^2}\ (1+p)\ \mathrm{Sec}[e+f x]^2\,\mathrm{Tan}[e+f x]^p$$

$$\Bigg(\frac{1}{a^2\ (1+p)}\Bigg(-(a^2+b^2)\ \mathrm{Hypergeometric2F1}\Big[1,\ \frac{1+p}{2},\ \frac{3+p}{2},\ \frac{(-a^2+b^2)\,\mathrm{Tan}[e+f x]^2}{a^2}\Big]+$$

$$2\,b^2\,\mathrm{Hypergeometric2F1}\Big[2,\ \frac{1+p}{2},\ \frac{3+p}{2},\ \frac{(-a^2+b^2)\,\mathrm{Tan}[e+f x]^2}{a^2}\Big]\Bigg)+$$

$$\Bigg(2\,a^3\,b\ (a^2-b^2)\ (4+p)\ \mathrm{AppellF1}\Big[\frac{2+p}{2},\ -\frac{1}{2},\ 2,\ \frac{4+p}{2},\ -\mathrm{Tan}[e+f x]^2,$$

$$\frac{(-a^2+b^2)\,\mathrm{Tan}[e+f x]^2}{a^2}\Big]\ \mathrm{Tan}[e+f x]\ \sqrt{1+\mathrm{Tan}[e+f x]^2}\Bigg)\Bigg/$$

$$\Bigg((2+p)\ \Bigg(a^2\ (4+p)\ \mathrm{AppellF1}\Big[\frac{2+p}{2},\ -\frac{1}{2},\ 2,\ \frac{4+p}{2},\ -\mathrm{Tan}[e+f x]^2,$$

$$\Big(-1+\frac{b^2}{a^2}\Big)\ \mathrm{Tan}[e+f x]^2\Big]+\Bigg(-4\ (a^2-b^2)\ \mathrm{AppellF1}\Big[\frac{4+p}{2},\ -\frac{1}{2},\ 3,\ \frac{6+p}{2},$$

$$-\mathrm{Tan}[e+f x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)\ \mathrm{Tan}[e+f x]^2\Big]+a^2\,\mathrm{AppellF1}\Big[\frac{4+p}{2},\ \frac{1}{2},$$

$$2,\ \frac{6+p}{2},\ -\mathrm{Tan}[e+f x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)\ \mathrm{Tan}[e+f x]^2\Big]\Bigg)\ \mathrm{Tan}[e+f x]^2\Bigg)$$

$$\Big(b^2\,\mathrm{Tan}[e+f x]^2-a^2\ (1+\mathrm{Tan}[e+f x]^2)\Big)^2\Bigg)\Bigg)+\frac{1}{-a^2+b^2}\ \mathrm{Tan}[e+f x]^{1+p}$$

$$\Bigg(-\Bigg(\Bigg(4\,a^3\,b\ (a^2-b^2)\ (4+p)\ \mathrm{AppellF1}\Big[\frac{2+p}{2},\ -\frac{1}{2},\ 2,\ \frac{4+p}{2},\ -\mathrm{Tan}[e+f x]^2,$$

$$\frac{(-a^2+b^2)\,\mathrm{Tan}[e+f x]^2}{a^2}\Big]\ \mathrm{Tan}[e+f x]\ \Big(-2\,a^2\,\mathrm{Sec}[e+f x]^2\,\mathrm{Tan}[e+f x]+2\,b^2$$

$$\mathrm{Sec}[e+f x]^2\,\mathrm{Tan}[e+f x]\Big)\ \sqrt{1+\mathrm{Tan}[e+f x]^2}\Bigg)\Bigg/\ \Bigg((2+p)\ \Bigg(a^2\ (4+p)\ \mathrm{AppellF1}\Big[$$

$$\frac{2+p}{2},\ -\frac{1}{2},\ 2,\ \frac{4+p}{2},\ -\mathrm{Tan}[e+f x]^2,\ \Big(-1+\frac{b^2}{a^2}\Big)\ \mathrm{Tan}[e+f x]^2\Big]+\Bigg(-4\ (a^2-b^2)$$

$$\text{AppellF1}\left[\frac{4+p}{2},-\frac{1}{2},3,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]+$$

$$a^2\,\text{AppellF1}\left[\frac{4+p}{2},\frac{1}{2},2,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]\Big)$$

$$\text{Tan}[e+f x]^2\Big)\left(b^2\,\text{Tan}[e+f x]^2-a^2\left(1+\text{Tan}[e+f x]^2\right)\right)^3\Big)\Big)+$$

$$\Big(2\,a^3\,b\left(a^2-b^2\right)(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},-\frac{1}{2},2,\frac{4+p}{2},-\text{Tan}[e+f x]^2,\right.$$

$$\left.\frac{\left(-a^2+b^2\right)\text{Tan}[e+f x]^2}{a^2}\right]\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]^2\Big)\Big/\Big(\left(2+p\right)\sqrt{1+\text{Tan}[e+f x]^2}$$

$$\Big(a^2\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},-\frac{1}{2},2,\frac{4+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]+$$

$$\Big(-4\left(a^2-b^2\right)\text{AppellF1}\left[\frac{4+p}{2},-\frac{1}{2},3,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\right.$$

$$\left.\text{Tan}[e+f x]^2\right]+a^2\,\text{AppellF1}\left[\frac{4+p}{2},\frac{1}{2},2,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\right.$$

$$\left.\text{Tan}[e+f x]^2\right]\Big)\,\text{Tan}[e+f x]^2\Big)\left(b^2\,\text{Tan}[e+f x]^2-a^2\left(1+\text{Tan}[e+f x]^2\right)\right)^2\Big)+$$

$$\Big(2\,a^3\,b\left(a^2-b^2\right)(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},-\frac{1}{2},2,\frac{4+p}{2},-\text{Tan}[e+f x]^2,\right.$$

$$\left.\frac{\left(-a^2+b^2\right)\text{Tan}[e+f x]^2}{a^2}\right]\text{Sec}[e+f x]^2\sqrt{1+\text{Tan}[e+f x]^2}\Big)\Big/\Big(\left(2+p\right)$$

$$\Big(a^2\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},-\frac{1}{2},2,\frac{4+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]+$$

$$\Big(-4\left(a^2-b^2\right)\text{AppellF1}\left[\frac{4+p}{2},-\frac{1}{2},3,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\right.$$

$$\left.\text{Tan}[e+f x]^2\right]+a^2\,\text{AppellF1}\left[\frac{4+p}{2},\frac{1}{2},2,\frac{6+p}{2},-\text{Tan}[e+f x]^2,\left(-1+\frac{b^2}{a^2}\right)\right.$$

$$\left.\text{Tan}[e+f x]^2\right]\Big)\,\text{Tan}[e+f x]^2\Big)\left(b^2\,\text{Tan}[e+f x]^2-a^2\left(1+\text{Tan}[e+f x]^2\right)\right)^2\Big)+$$

$$\Big(2\,a^3\,b\left(a^2-b^2\right)(4+p)\,\text{Tan}[e+f x]\left(\frac{1}{a^2\,(4+p)}4\left(-a^2+b^2\right)\left(2+p\right)\text{AppellF1}\left[1+\frac{2+p}{2},\right.\right.$$

$$-\frac{1}{2},3,1+\frac{4+p}{2},-\text{Tan}[e+f x]^2,\left.\frac{\left(-a^2+b^2\right)\text{Tan}[e+f x]^2}{a^2}\right]\text{Sec}[e+f x]^2\,\text{Tan}[$$

$$e+f x]+\frac{1}{4+p}\left(2+p\right)\text{AppellF1}\left[1+\frac{2+p}{2},\frac{1}{2},2,1+\frac{4+p}{2},-\text{Tan}[e+f x]^2,\right.$$

$$\left.\left.\frac{\left(-a^2+b^2\right)\text{Tan}[e+f x]^2}{a^2}\right]\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]\right)\sqrt{1+\text{Tan}[e+f x]^2}\Big)\Big/$$

$$\Big(\left(2+p\right)\Big(a^2\,(4+p)\,\text{AppellF1}\left[\frac{2+p}{2},-\frac{1}{2},2,\frac{4+p}{2},-\text{Tan}[e+f x]^2,\right.$$

$$\left.\left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\right]+\Big(-4\left(a^2-b^2\right)\text{AppellF1}\left[\frac{4+p}{2},\right.$$

$$-\frac{1}{2}, 3, \frac{6+p}{2}, -\text{Tan}[e+f x]^2, \left(-1+\frac{b^2}{a^2}\right) \text{Tan}[e+f x]^2\Big] +$$

$$a^2 \text{AppellF1}\Big[\frac{4+p}{2}, \frac{1}{2}, 2, \frac{6+p}{2}, -\text{Tan}[e+f x]^2, \left(-1+\frac{b^2}{a^2}\right) \text{Tan}[e+f x]^2\Big]\Big)$$

$$\text{Tan}[e+f x]^2\Big) \left(b^2 \text{Tan}[e+f x]^2 - a^2 \left(1+\text{Tan}[e+f x]^2\right)\right)^2\Big) -$$

$$\Big(2 a^3 b \left(a^2-b^2\right) (4+p) \text{AppellF1}\Big[\frac{2+p}{2}, -\frac{1}{2}, 2, \frac{4+p}{2}, -\text{Tan}[e+f x]^2,$$

$$\frac{\left(-a^2+b^2\right) \text{Tan}[e+f x]^2}{a^2}\Big] \text{Tan}[e+f x] \sqrt{1+\text{Tan}[e+f x]^2} \Big(2 \Big(-4 \left(a^2-b^2\right)$$

$$\text{AppellF1}\Big[\frac{4+p}{2}, -\frac{1}{2}, 3, \frac{6+p}{2}, -\text{Tan}[e+f x]^2, \left(-1+\frac{b^2}{a^2}\right) \text{Tan}[e+f x]^2\Big] +$$

$$a^2 \text{AppellF1}\Big[\frac{4+p}{2}, \frac{1}{2}, 2, \frac{6+p}{2}, -\text{Tan}[e+f x]^2, \left(-1+\frac{b^2}{a^2}\right) \text{Tan}[e+f x]^2\Big]\Big)$$

$$\text{Sec}[e+f x]^2 \text{Tan}[e+f x] + a^2 (4+p) \Big(\frac{1}{4+p} 4 \left(-1+\frac{b^2}{a^2}\right) (2+p)$$

$$\text{AppellF1}\Big[1+\frac{2+p}{2}, -\frac{1}{2}, 3, 1+\frac{4+p}{2}, -\text{Tan}[e+f x]^2, \left(-1+\frac{b^2}{a^2}\right) \text{Tan}[e+f x]^2\Big]$$

$$\text{Sec}[e+f x]^2 \text{Tan}[e+f x] + \frac{1}{4+p} (2+p) \text{AppellF1}\Big[1+\frac{2+p}{2}, \frac{1}{2}, 2, 1+\frac{4+p}{2},$$

$$-\text{Tan}[e+f x]^2, \left(-1+\frac{b^2}{a^2}\right) \text{Tan}[e+f x]^2\Big] \text{Sec}[e+f x]^2 \text{Tan}[e+f x]\Big) +$$

$$\text{Tan}[e+f x]^2 \Big(-4 \left(a^2-b^2\right) \Big(\frac{1}{6+p} 6 \left(-1+\frac{b^2}{a^2}\right) (4+p) \text{AppellF1}\Big[1+\frac{4+p}{2},$$

$$-\frac{1}{2}, 4, 1+\frac{6+p}{2}, -\text{Tan}[e+f x]^2, \left(-1+\frac{b^2}{a^2}\right) \text{Tan}[e+f x]^2\Big] \text{Sec}[e+f x]^2$$

$$\text{Tan}[e+f x] + \frac{1}{6+p} (4+p) \text{AppellF1}\Big[1+\frac{4+p}{2}, \frac{1}{2}, 3, 1+\frac{6+p}{2},$$

$$-\text{Tan}[e+f x]^2, \left(-1+\frac{b^2}{a^2}\right) \text{Tan}[e+f x]^2\Big] \text{Sec}[e+f x]^2 \text{Tan}[e+f x]\Big) +$$

$$a^2 \Big(\frac{1}{6+p} 4 \left(-1+\frac{b^2}{a^2}\right) (4+p) \text{AppellF1}\Big[1+\frac{4+p}{2}, \frac{1}{2}, 3, 1+\frac{6+p}{2},$$

$$-\text{Tan}[e+f x]^2, \left(-1+\frac{b^2}{a^2}\right) \text{Tan}[e+f x]^2\Big] \text{Sec}[e+f x]^2 \text{Tan}[e+f x] -$$

$$\frac{1}{6+p} (4+p) \text{AppellF1}\Big[1+\frac{4+p}{2}, \frac{3}{2}, 2, 1+\frac{6+p}{2}, -\text{Tan}[e+f x]^2,$$

$$\left(-1+\frac{b^2}{a^2}\right) \text{Tan}[e+f x]^2\Big] \text{Sec}[e+f x]^2 \text{Tan}[e+f x]\Big)\Big)\Big)\Big)\Big) \Big/$$

$$\Big((2+p) \Big(a^2 (4+p) \text{AppellF1}\Big[\frac{2+p}{2}, -\frac{1}{2}, 2, \frac{4+p}{2}, -\text{Tan}[e+f x]^2,$$

$$\left(-1+\frac{b^2}{a^2}\right) \text{Tan}[e+f x]^2\Big] + \Big(-4 \left(a^2-b^2\right) \text{AppellF1}\Big[\frac{4+p}{2}, -\frac{1}{2}, 3, \frac{6+p}{2},$$

$$-\text{Tan}[e+f x]^2,\ \left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\Big]+a^2\,\text{AppellF1}\Big[\frac{4+p}{2},\ \frac{1}{2},$$

$$2,\ \frac{6+p}{2},\ -\text{Tan}[e+f x]^2,\ \left(-1+\frac{b^2}{a^2}\right)\text{Tan}[e+f x]^2\Big]\right)\text{Tan}[e+f x]^2\Bigg)^2$$

$$\left(b^2\,\text{Tan}[e+f x]^2-a^2\left(1+\text{Tan}[e+f x]^2\right)\right)^2\Bigg)+\frac{1}{a^2\,(1+p)}$$

$$\Bigg(2\,b^2\,(1+p)\,\text{Csc}[e+f x]\,\text{Sec}[e+f x]\,\Bigg(-\text{Hypergeometric2F1}\Big[2,\ \frac{1+p}{2},$$

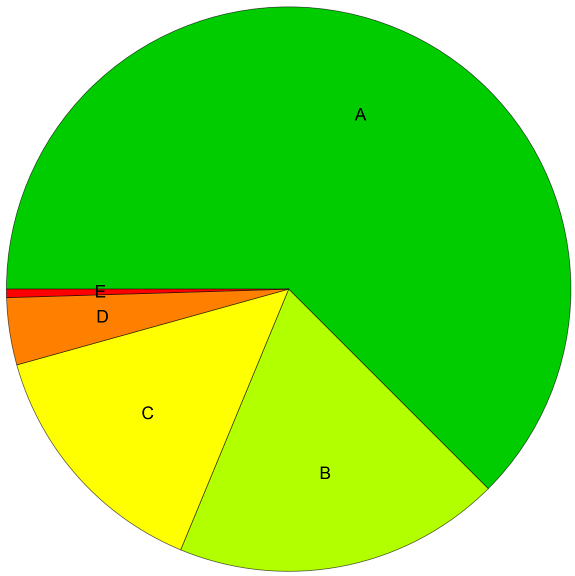
$$\frac{3+p}{2},\ \frac{\left(-a^2+b^2\right)\text{Tan}[e+f x]^2}{a^2}\Big]+\frac{1}{\left(1-\frac{\left(-a^2+b^2\right)\text{Tan}[e+f x]^2}{a^2}\right)^2}\Bigg)-$$

$$\left(a^2+b^2\right)(1+p)\,\text{Csc}[e+f x]\,\text{Sec}[e+f x]\,\Bigg(-\text{Hypergeometric2F1}\Big[1,\ \frac{1+p}{2},$$

$$\frac{3+p}{2},\ \frac{\left(-a^2+b^2\right)\text{Tan}[e+f x]^2}{a^2}\Big]+\frac{1}{1-\frac{\left(-a^2+b^2\right)\text{Tan}[e+f x]^2}{a^2}}\Bigg)\Bigg)\Bigg)\Bigg)\Bigg)$$

Summary of Integration Test Results

208 integration problems



A - 130 optimal antiderivatives

B - 39 more than twice size of optimal antiderivatives

C - 30 unnecessarily complex antiderivatives

D - 8 unable to integrate problems

E - 1 integration timeouts