Mathematica 11.3 Integration Test Results

Test results for the 387 problems in "4.3.0 (a trg)^m (b tan)^n.m"

Problem 59: Result unnecessarily involves imaginary or complex numbers.

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

Optimal (type 4, 105 leaves, 5 steps):

$$-\frac{5 d \,\text{Sin}[a+b x]}{6 b \sqrt{d \,\text{Tan}[a+b x]}}-\frac{d \,\text{Sin}[a+b x]^3}{3 b \sqrt{d \,\text{Tan}[a+b x]}}+\frac{1}{12 b}5 \,\text{Csc}[a+b x] \,\text{EllipticF}\left[a-\frac{\pi}{4}+b x, 2\right] \sqrt{\text{Sin}[2 a+2 b x]} \sqrt{d \,\text{Tan}[a+b x]}$$

Result (type 4, 139 leaves):

$$-\left(\left(\text{Cos}\left[2 \left(a+b x\right)\right] \text{Sec}[a+b x]\left(-5 \left(-1\right)^{1/4} \text{EllipticF}\left[i \,\text{ArcSinh}\left[\left(-1\right)^{1/4} \sqrt{\text{Tan}[a+b x]}\right], -1\right] \text{Sec}[a+b x]^2+\left(-6+\text{Cos}\left[2 \left(a+b x\right)\right]\right) \sqrt{\text{Sec}[a+b x]^2} \sqrt{\text{Tan}[a+b x]}\right) \sqrt{d \,\text{Tan}[a+b x]}\right) \Big/ \left(6 b \sqrt{\text{Sec}[a+b x]^2} \sqrt{\text{Tan}[a+b x]} \left(-1+\text{Tan}[a+b x]^2\right)\right)\right)$$

Problem 60: Result unnecessarily involves imaginary or complex numbers.

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

Optimal (type 4, 75 leaves, 4 steps):

$$-\frac{d \,\text{Sin}[a+b x]}{b \sqrt{d \,\text{Tan}[a+b x]}}+\frac{1}{2 b}\text{Csc}[a+b x] \,\text{EllipticF}\left[a-\frac{\pi}{4}+b x, 2\right] \sqrt{\text{Sin}[2 a+2 b x]} \sqrt{d \,\text{Tan}[a+b x]}$$

Result (type 4, 85 leaves):

$$-\frac{1}{b \sqrt{\text{Tan}[a+b x]}}\text{Cos}[a+b x]\left(\left(-1\right)^{1/4} \text{EllipticF}\left[i \,\text{ArcSinh}\left[\left(-1\right)^{1/4} \sqrt{\text{Tan}[a+b x]}\right], -1\right] \sqrt{\text{Sec}[a+b x]^2}+\sqrt{\text{Tan}[a+b x]}\right) \sqrt{d \,\text{Tan}[a+b x]}$$

Problem 61: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Csc}[a+b x] \sqrt{d \text{Tan}[a+b x]} \, dx$$

Optimal (type 4, 47 leaves, 3 steps):

$$\frac{1}{b}\text{Csc}[a+b x] \, \text{EllipticF}\left[a-\frac{\pi}{4}+b x, 2\right] \sqrt{\text{Sin}[2 a+2 b x]} \sqrt{d \text{Tan}[a+b x]}$$

Result (type 4, 73 leaves):

$$-\frac{1}{b \sqrt{\text{Tan}[a+b x]}} 2 (-1)^{1/4} \text{Cos}[a+b x] \, \text{EllipticF}\left[i \, \text{ArcSinh}\left[(-1)^{1/4} \sqrt{\text{Tan}[a+b x]}\right], -1\right] \sqrt{\text{Sec}[a+b x]^2} \sqrt{d \text{Tan}[a+b x]}$$

Problem 62: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Csc}[a+b x]^3 \sqrt{d \text{Tan}[a+b x]} \, dx$$

Optimal (type 4, 77 leaves, 4 steps):

$$-\frac{2 d \text{Csc}[a+b x]}{3 b \sqrt{d \text{Tan}[a+b x]}}+\frac{1}{3 b} 2 \text{Csc}[a+b x] \, \text{EllipticF}\left[a-\frac{\pi}{4}+b x, 2\right] \sqrt{\text{Sin}[2 a+2 b x]} \sqrt{d \text{Tan}[a+b x]}$$

Result (type 4, 115 leaves):

$$\left(2 \text{Cos}[2 (a+b x)] \text{Csc}[a+b x]^3 (d \text{Tan}[a+b x])^{3/2} \left(\sqrt{\text{Sec}[a+b x]^2}+2 (-1)^{1/4} \text{EllipticF}\left[i \, \text{ArcSinh}\left[(-1)^{1/4} \sqrt{\text{Tan}[a+b x]}\right], -1\right] \text{Tan}[a+b x]^{3/2}\right)\right) \Big/ \left(3 b d \sqrt{\text{Sec}[a+b x]^2} \left(-1+\text{Tan}[a+b x]^2\right)\right)$$

Problem 63: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Csc}[a+b x]^5 \sqrt{d \text{Tan}[a+b x]} \, dx$$

Optimal (type 4, 105 leaves, 5 steps):

$$-\frac{4 d \text{Csc}[a+b x]}{7 b \sqrt{d \text{Tan}[a+b x]}}-\frac{2 d \text{Csc}[a+b x]^3}{7 b \sqrt{d \text{Tan}[a+b x]}}+\frac{1}{7 b} 4 \text{Csc}[a+b x] \, \text{EllipticF}\left[a-\frac{\pi}{4}+b x, 2\right] \sqrt{\text{Sin}[2 a+2 b x]} \sqrt{d \text{Tan}[a+b x]}$$

Result (type 4, 124 leaves):

$$-\left(\left(2\,d\,\text{Cos}\left[2\,(a+b\,x)\right]\,\text{Csc}[a+b\,x]^3\,\left(\left(-2+\text{Cos}\left[2\,(a+b\,x)\right]\right)\,\left(\text{Sec}[a+b\,x]^2\right)^{3/2}-4\,(-1)^{1/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]\,\text{Tan}[a+b\,x]^{7/2}\right)\right)\Big/\left(7\,b\,\sqrt{\text{Sec}[a+b\,x]^2}\,\sqrt{d\,\text{Tan}[a+b\,x]}\,\left(-1+\text{Tan}[a+b\,x]^2\right)\right)\right)$$

Problem 69: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Sin}[a+b\,x]^3\,\left(d\,\text{Tan}[a+b\,x]\right)^{3/2}\,dx$$

Optimal (type 4, 110 leaves, 5 steps):

$$\frac{7\,d^3\,\text{Sin}[a+b\,x]^3}{3\,b\,\left(d\,\text{Tan}[a+b\,x]\right)^{3/2}}-\frac{7\,d^2\,\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,2\right]\,\text{Sin}[a+b\,x]}{2\,b\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\text{Tan}[a+b\,x]}}+\frac{2\,d\,\text{Sin}[a+b\,x]^3\,\sqrt{d\,\text{Tan}[a+b\,x]}}{b}$$

Result (type 4, 156 leaves):

$$-\left(\left(\left(\left(42\,(-1)^{3/4}\,\text{Cos}[a+b\,x]\,\text{EllipticE}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]\,\sqrt{\text{Sec}[a+b\,x]^2}-42\,(-1)^{3/4}\,\text{Cos}[a+b\,x]\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]\,\sqrt{\text{Sec}[a+b\,x]^2}+\left(17\,\text{Sin}[a+b\,x]-\text{Sin}\left[3\,(a+b\,x)\right]\right)\,\sqrt{\text{Tan}[a+b\,x]}\right)\,\left(d\,\text{Tan}[a+b\,x]\right)^{3/2}\right)\Big/\left(12\,b\,\text{Tan}[a+b\,x]^{3/2}\right)\right)$$

Problem 70: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Sin}[a+b\,x]\,\left(d\,\text{Tan}[a+b\,x]\right)^{3/2}\,dx$$

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

$$-\frac{3\,d^2\,\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,2\right]\,\text{Sin}[a+b\,x]}{b\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\text{Tan}[a+b\,x]}}+\frac{2\,d\,\text{Sin}[a+b\,x]\,\sqrt{d\,\text{Tan}[a+b\,x]}}{b}$$

Result (type 4, 128 leaves):

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

Problem 71: Result unnecessarily involves imaginary or complex numbers.

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

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

$$-\frac{2 d^2 \,\text{EllipticE}\left[a-\frac{\pi}{4}+b x,2\right] \text{Sin}[a+b x]}{b \sqrt{\text{Sin}[2 a+2 b x]} \sqrt{d\,\text{Tan}[a+b x]}}+\frac{2 d \,\text{Sin}[a+b x] \sqrt{d\,\text{Tan}[a+b x]}}{b}$$

Result (type 4, 99 leaves):

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

Problem 72: Result unnecessarily involves imaginary or complex numbers.

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

Optimal (type 4, 102 leaves, 5 steps):

$$-\frac{4 d^2 \,\text{Cos}[a+b x]}{b \sqrt{d\,\text{Tan}[a+b x]}}-\frac{4 d^2 \,\text{EllipticE}\left[a-\frac{\pi}{4}+b x,2\right] \text{Sin}[a+b x]}{b \sqrt{\text{Sin}[2 a+2 b x]} \sqrt{d\,\text{Tan}[a+b x]}}+\frac{2 d \,\text{Csc}[a+b x] \sqrt{d\,\text{Tan}[a+b x]}}{b}$$

Result (type 4, 129 leaves):

$$-\frac{1}{b \sqrt{\text{Sec}[a+b x]^2}} 2 d \,\text{Csc}[a+b x] \left(\sqrt{\text{Sec}[a+b x]^2}+2 (-1)^{3/4} \text{EllipticE}\left[i \,\text{ArcSinh}\left[(-1)^{1/4} \sqrt{\text{Tan}[a+b x]}\right],-1\right] \sqrt{\text{Tan}[a+b x]}-2 (-1)^{3/4} \text{EllipticF}\left[i \,\text{ArcSinh}\left[(-1)^{1/4} \sqrt{\text{Tan}[a+b x]}\right],-1\right] \sqrt{\text{Tan}[a+b x]}\right) \sqrt{d\,\text{Tan}[a+b x]}$$

Problem 78: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Sin}[a+b x]^3\,(d\,\text{Tan}[a+b x])^{5/2}\,dx$$

Optimal (type 4, 137 leaves, 6 steps):

$$\frac{5 d^3 \,\text{Sin}[a+b x]}{2 b \sqrt{d\,\text{Tan}[a+b x]}}+\frac{d^3 \,\text{Sin}[a+b x]^3}{b \sqrt{d\,\text{Tan}[a+b x]}}-\frac{1}{4 b} 5 d^2 \,\text{Csc}[a+b x] \,\text{EllipticF}\left[a-\frac{\pi}{4}+b x,2\right] \sqrt{\text{Sin}[2 a+2 b x]} \sqrt{d\,\text{Tan}[a+b x]}+\frac{2 d \,\text{Sin}[a+b x]^3 (d\,\text{Tan}[a+b x])^{3/2}}{3 b}$$

Result (type 4, 200 leaves):

$$\frac{1}{b}\text{Cot}[a+b x]^2\left(-\frac{5}{2}\text{Cos}[a+b x]-\frac{1}{12}\text{Cos}[3(a+b x)]+\frac{2}{3}\text{Sec}[a+b x]\right)(d\,\text{Tan}[a+b x])^{5/2}+\left((d\,\text{Tan}[a+b x])^{5/2}\left(\left(60(-1)^{1/4}\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b x]}\right],-1\right]\text{Sec}[a+b x]^3\right)\Big/\left(1+\text{Tan}[a+b x]^2\right)^{3/2}+\frac{106\,\text{Cos}[2(a+b x)]\,\text{Csc}[a+b x]\,\text{Sec}[a+b x]^2\,\text{Tan}[a+b x]^{3/2}}{\left(1-\text{Tan}[a+b x]^2\right)\left(1+\text{Tan}[a+b x]^2\right)}\right)\right)\Big/\left(24\,b\,\text{Tan}[a+b x]^{5/2}\right)$$

Problem 79: Result unnecessarily involves imaginary or complex numbers.

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

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

$$\frac{5\,d^3\,\text{Sin}[a+b x]}{3\,b\,\sqrt{d\,\text{Tan}[a+b x]}}-\frac{1}{6\,b}5\,d^2\,\text{Csc}[a+b x]\,\text{EllipticF}\left[a-\frac{\pi}{4}+b x,2\right]\sqrt{\text{Sin}[2a+2b x]}\,\sqrt{d\,\text{Tan}[a+b x]}+\frac{2\,d\,\text{Sin}[a+b x]\,(d\,\text{Tan}[a+b x])^{3/2}}{3\,b}$$

Result (type 4, 133 leaves):

$$-\left(\left(\text{Cos}[2(a+b x)]\,\text{Csc}[a+b x]\sqrt{\text{Sec}[a+b x]^2}\left(10(-1)^{1/4}\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b x]}\right],-1\right]+(7+3\,\text{Cos}[2(a+b x)])\sqrt{\text{Sec}[a+b x]^2}\,\sqrt{\text{Tan}[a+b x]}\right)(d\,\text{Tan}[a+b x])^{5/2}\right)\Big/\left(6\,b\,\text{Tan}[a+b x]^{3/2}\left(-1+\text{Tan}[a+b x]^2\right)\right)\right)$$

Problem 80: Result unnecessarily involves imaginary or complex numbers.

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

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

$$-\frac{1}{3\,b}d^2\,\text{Csc}[a+b x]\,\text{EllipticF}\left[a-\frac{\pi}{4}+b x,2\right]\sqrt{\text{Sin}[2a+2b x]}\,\sqrt{d\,\text{Tan}[a+b x]}+\frac{2\,d\,\text{Csc}[a+b x]\,(d\,\text{Tan}[a+b x])^{3/2}}{3\,b}$$

Result (type 4, 87 leaves):

$$\left(2\,\text{Csc}[a+b\,x]\left(\frac{(-1)^{1/4}\,\text{EllipticF}\left[\text{i}\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]}{\sqrt{\text{Sec}[a+b\,x]^2}}+\sqrt{\text{Tan}[a+b\,x]}\right)(d\,\text{Tan}[a+b\,x])^{5/2}\right)\Big/\left(3\,b\,\text{Tan}[a+b\,x]^{3/2}\right)$$

Problem 81: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Csc}[a+b\,x]^3\,(d\,\text{Tan}[a+b\,x])^{5/2}\,dx$$

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

$$\frac{1}{3\,b}2\,d^2\,\text{Csc}[a+b\,x]\,\text{EllipticF}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\sqrt{\text{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\text{Tan}[a+b\,x]}+\frac{2\,d\,\text{Csc}[a+b\,x]\,(d\,\text{Tan}[a+b\,x])^{3/2}}{3\,b}$$

Result (type 4, 88 leaves):

$$\left(2\,\text{Csc}[a+b\,x]\left(-\frac{2\,(-1)^{1/4}\,\text{EllipticF}\left[\text{i}\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]}{\sqrt{\text{Sec}[a+b\,x]^2}}+\sqrt{\text{Tan}[a+b\,x]}\right)(d\,\text{Tan}[a+b\,x])^{5/2}\right)\Big/\left(3\,b\,\text{Tan}[a+b\,x]^{3/2}\right)$$

Problem 82: Result unnecessarily involves imaginary or complex numbers.

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

Optimal (type 4, 110 leaves, 5 steps):

$$-\frac{4\,d^3\,\text{Csc}[a+b\,x]}{3\,b\,\sqrt{d\,\text{Tan}[a+b\,x]}}+\frac{1}{3\,b}4\,d^2\,\text{Csc}[a+b\,x]\,\text{EllipticF}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\sqrt{\text{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\text{Tan}[a+b\,x]}+\frac{2\,d\,\text{Csc}[a+b\,x]^3\,(d\,\text{Tan}[a+b\,x])^{3/2}}{3\,b}$$

Result (type 4, 110 leaves):

$$-\left(\left(2\,d\,\text{Csc}[a+b\,x]^3\left(\text{Cos}[2\,(a+b\,x)]\sqrt{\text{Sec}[a+b\,x]^2}+2\,(-1)^{1/4}\,\text{EllipticF}\left[\text{i}\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]\text{Sin}[2\,(a+b\,x)]\sqrt{\text{Tan}[a+b\,x]}\right)(d\,\text{Tan}[a+b\,x])^{3/2}\right)\Big/\left(3\,b\,\sqrt{\text{Sec}[a+b\,x]^2}\right)\right)$$

Problem 83: Result unnecessarily involves imaginary or complex numbers.

$$\int \mathrm{Csc}[a+b\,x]^7\,(d\,\mathrm{Tan}[a+b\,x])^{5/2}\,dx$$

Optimal (type 4, 140 leaves, 6 steps):

$$-\frac{40\,d^3\,\mathrm{Csc}[a+b\,x]}{21\,b\,\sqrt{d\,\mathrm{Tan}[a+b\,x]}}-\frac{20\,d^3\,\mathrm{Csc}[a+b\,x]^3}{21\,b\,\sqrt{d\,\mathrm{Tan}[a+b\,x]}}+\frac{1}{21\,b}40\,d^2\,\mathrm{Csc}[a+b\,x]\,\mathrm{EllipticF}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\sqrt{\mathrm{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\mathrm{Tan}[a+b\,x]}+\frac{2\,d\,\mathrm{Csc}[a+b\,x]^5\,(d\,\mathrm{Tan}[a+b\,x])^{3/2}}{3\,b}$$

Result (type 4, 130 leaves):

$$-\left(\left(d^2\,\mathrm{Csc}[a+b\,x]\left((1+10\,\mathrm{Cos}[2\,(a+b\,x)]-5\,\mathrm{Cos}[4\,(a+b\,x)])\,\mathrm{Csc}[a+b\,x]^3\,\mathrm{Sec}[a+b\,x]\,\sqrt{\mathrm{Sec}[a+b\,x]^2}+80\,(-1)^{1/4}\,\mathrm{EllipticF}\left[i\,\mathrm{ArcSinh}\left[(-1)^{1/4}\sqrt{\mathrm{Tan}[a+b\,x]}\right],-1\right]\sqrt{\mathrm{Tan}[a+b\,x]}\right)\sqrt{d\,\mathrm{Tan}[a+b\,x]}\right)\Big/\left(21\,b\,\sqrt{\mathrm{Sec}[a+b\,x]^2}\right)\right)$$

Problem 89: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\mathrm{Sin}[a+b\,x]^5}{\sqrt{d\,\mathrm{Tan}[a+b\,x]}}\,dx$$

Optimal (type 4, 107 leaves, 5 steps):

$$-\frac{7\,d\,\mathrm{Sin}[a+b\,x]^3}{30\,b\,(d\,\mathrm{Tan}[a+b\,x])^{3/2}}-\frac{d\,\mathrm{Sin}[a+b\,x]^5}{5\,b\,(d\,\mathrm{Tan}[a+b\,x])^{3/2}}+\frac{7\,\mathrm{EllipticE}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\mathrm{Sin}[a+b\,x]}{20\,b\,\sqrt{\mathrm{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\mathrm{Tan}[a+b\,x]}}$$

Result (type 4, 153 leaves):

$$\left(\mathrm{Cos}[a+b\,x]\,\sqrt{\mathrm{Tan}[a+b\,x]}\left(42\,(-1)^{3/4}\,\mathrm{EllipticE}\left[i\,\mathrm{ArcSinh}\left[(-1)^{1/4}\sqrt{\mathrm{Tan}[a+b\,x]}\right],-1\right]\sqrt{\mathrm{Sec}[a+b\,x]^2}-42\,(-1)^{3/4}\,\mathrm{EllipticF}\left[i\,\mathrm{ArcSinh}\left[(-1)^{1/4}\sqrt{\mathrm{Tan}[a+b\,x]}\right],-1\right]\sqrt{\mathrm{Sec}[a+b\,x]^2}+(25-14\,\mathrm{Cos}[2\,(a+b\,x)]+3\,\mathrm{Cos}[4\,(a+b\,x)])\,\mathrm{Tan}[a+b\,x]^{3/2}\right)\right)\Big/\left(120\,b\,\sqrt{d\,\mathrm{Tan}[a+b\,x]}\right)$$

Problem 90: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\mathrm{Sin}[a+b\,x]^3}{\sqrt{d\,\mathrm{Tan}[a+b\,x]}}\,dx$$

Optimal (type 4, 79 leaves, 4 steps):

$$-\frac{d\,\text{Sin}[a+b\,x]^3}{3\,b\,\left(d\,\text{Tan}[a+b\,x]\right)^{3/2}}+\frac{\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\,\text{Sin}[a+b\,x]}{2\,b\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\text{Tan}[a+b\,x]}}$$

Result (type 4, 154 leaves):

$$-\Bigg(\Bigg(\text{Cos}[a+b\,x]\,\Bigg(-6\,(-1)^{3/4}\,\text{EllipticE}\left[\mathrm{i}\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],\,-1\right]\,\sqrt{\text{Sec}[a+b\,x]^2}+6\,(-1)^{3/4}\,\text{EllipticF}\left[\mathrm{i}\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],\,-1\right]\,\sqrt{\text{Sec}[a+b\,x]^2}+\text{Sec}[a+b\,x]\,\left(-5\,\text{Sin}[a+b\,x]+\text{Sin}[3\,(a+b\,x)]\right)\,\sqrt{\text{Tan}[a+b\,x]}\Bigg)\,\sqrt{\text{Tan}[a+b\,x]}\Bigg)\Bigg/\left(12\,b\,\sqrt{d\,\text{Tan}[a+b\,x]}\right)\Bigg)$$

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

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

Optimal (type 4, 47 leaves, 3 steps):

$$\frac{\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\,\text{Sin}[a+b\,x]}{b\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\text{Tan}[a+b\,x]}}$$

Result (type 4, 126 leaves):

$$\Bigg(\text{Cos}[a+b\,x]\,\sqrt{\text{Tan}[a+b\,x]}\,\Bigg((-1)^{3/4}\,\text{EllipticE}\left[\mathrm{i}\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],\,-1\right]\,\sqrt{\text{Sec}[a+b\,x]^2}-(-1)^{3/4}\,\text{EllipticF}\left[\mathrm{i}\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],\,-1\right]\,\sqrt{\text{Sec}[a+b\,x]^2}+\text{Tan}[a+b\,x]^{3/2}\Bigg)\Bigg)\Bigg/\left(b\,\sqrt{d\,\text{Tan}[a+b\,x]}\right)$$

Problem 92: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Csc}[a+b\,x]}{\sqrt{d\,\text{Tan}[a+b\,x]}}\,dx$$

Optimal (type 4, 72 leaves, 4 steps):

$$-\frac{2\,\text{Cos}[a+b\,x]}{b\,\sqrt{d\,\text{Tan}[a+b\,x]}}-\frac{2\,\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\,\text{Sin}[a+b\,x]}{b\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\text{Tan}[a+b\,x]}}$$

Result (type 4, 135 leaves):

$$-\left(\left(2\,\text{Cos}[a+b\,x]\left(\text{Sec}[a+b\,x]^2+(-1)^{3/4}\,\text{EllipticE}\left[\text{i}\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]\sqrt{\text{Sec}[a+b\,x]^2}\sqrt{\text{Tan}[a+b\,x]}-(-1)^{3/4}\,\text{EllipticF}\left[\text{i}\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]\sqrt{\text{Sec}[a+b\,x]^2}\sqrt{\text{Tan}[a+b\,x]}\right)\right)\Big/\left(b\sqrt{d\,\text{Tan}[a+b\,x]}\right)\right)$$

Problem 93: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Csc}[a+b\,x]^3}{\sqrt{d\,\text{Tan}[a+b\,x]}}\,dx$$

Optimal (type 4, 102 leaves, 5 steps):

$$-\frac{2\,d\,\text{Csc}[a+b\,x]}{5\,b\,(d\,\text{Tan}[a+b\,x])^{3/2}}-\frac{4\,\text{Cos}[a+b\,x]}{5\,b\sqrt{d\,\text{Tan}[a+b\,x]}}-\frac{4\,\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,2\right]\text{Sin}[a+b\,x]}{5\,b\sqrt{\text{Sin}[2\,a+2\,b\,x]}\sqrt{d\,\text{Tan}[a+b\,x]}}$$

Result (type 4, 149 leaves):

$$\left(\text{Sec}[a+b\,x]\left((-3+\text{Cos}[2\,(a+b\,x)])\,\text{Csc}[a+b\,x]^2\sqrt{\text{Sec}[a+b\,x]^2}-4\,(-1)^{3/4}\,\text{EllipticE}\left[\text{i}\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]\sqrt{\text{Tan}[a+b\,x]}+4\,(-1)^{3/4}\,\text{EllipticF}\left[\text{i}\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]\sqrt{\text{Tan}[a+b\,x]}\right)\right)\Big/\left(5\,b\sqrt{\text{Sec}[a+b\,x]^2}\sqrt{d\,\text{Tan}[a+b\,x]}\right)$$

Problem 99: Result unnecessarily involves imaginary or complex numbers.

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

Optimal (type 4, 112 leaves, 5 steps):

$$-\frac{\text{Sin}[a+b\,x]}{6\,b\,d\sqrt{d\,\text{Tan}[a+b\,x]}}+\frac{\text{Sin}[a+b\,x]^3}{3\,b\,d\sqrt{d\,\text{Tan}[a+b\,x]}}+\frac{1}{12\,b\,d^2}\text{Csc}[a+b\,x]\,\text{EllipticF}\left[a-\frac{\pi}{4}+b\,x,2\right]\sqrt{\text{Sin}[2\,a+2\,b\,x]}\sqrt{d\,\text{Tan}[a+b\,x]}$$

Result (type 4, 102 leaves):

$$-\left(\left(\text{Csc}[a+b\,x]\left(\sqrt{\text{Sec}[a+b\,x]^2}\,\text{Sin}[4\,(a+b\,x)]+4\,(-1)^{1/4}\,\text{EllipticF}\left[\text{i}\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]\sqrt{\text{Tan}[a+b\,x]}\right)\sqrt{d\,\text{Tan}[a+b\,x]}\right)\Big/\left(24\,b\,d^2\sqrt{\text{Sec}[a+b\,x]^2}\right)\right)$$

Problem 100: Result unnecessarily involves imaginary or complex numbers.

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

Optimal (type 4, 79 leaves, 4 steps):

$$\frac{\text{Sin}[a+b x]}{b d \sqrt{d \text{Tan}[a+b x]}}+\frac{\text{EllipticF}\left[a-\frac{\pi}{4}+b x, 2\right] \text{Sec}[a+b x] \sqrt{\text{Sin}[2 a+2 b x]}}{2 b d \sqrt{d \text{Tan}[a+b x]}}$$

Result (type 4, 126 leaves):

$$\left(\text{Cos}[2 (a+b x)] \text{Sec}[a+b x] \left((-1)^{1/4} \text{EllipticF}\left[i \text{ArcSinh}\left[(-1)^{1/4} \sqrt{\text{Tan}[a+b x]}\right], -1\right] \text{Sec}[a+b x]^2 - \sqrt{\text{Sec}[a+b x]^2} \sqrt{\text{Tan}[a+b x]}\right) \text{Tan}[a+b x]^{3/2}\right) \Big/ \left(b \sqrt{\text{Sec}[a+b x]^2} (d \text{Tan}[a+b x])^{3/2} \left(-1+\text{Tan}[a+b x]^2\right)\right)$$

Problem 101: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Csc}[a+b x]}{(d \text{Tan}[a+b x])^{3/2}} \, dx$$

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

$$-\frac{2 \text{Csc}[a+b x]}{3 b d \sqrt{d \text{Tan}[a+b x]}}-\frac{1}{3 b d^2} \text{Csc}[a+b x] \text{EllipticF}\left[a-\frac{\pi}{4}+b x, 2\right] \sqrt{\text{Sin}[2 a+2 b x]} \sqrt{d \text{Tan}[a+b x]}$$

Result (type 4, 110 leaves):

$$\left(2 \text{Cos}[2 (a+b x)] \text{Sec}[a+b x] \sqrt{\text{Sec}[a+b x]^2} \left(\sqrt{\text{Sec}[a+b x]^2} - (-1)^{1/4} \text{EllipticF}\left[i \text{ArcSinh}\left[(-1)^{1/4} \sqrt{\text{Tan}[a+b x]}\right], -1\right] \text{Tan}[a+b x]^{3/2}\right)\right) \Big/ \left(3 b (d \text{Tan}[a+b x])^{3/2} \left(-1+\text{Tan}[a+b x]^2\right)\right)$$

Problem 102: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Csc}[a+b x]^3}{(d \text{Tan}[a+b x])^{3/2}} \, dx$$

Optimal (type 4, 112 leaves, 5 steps):

$$\frac{2\,\mathrm{Csc}[a+b\,x]}{21\,b\,d\,\sqrt{d\,\mathrm{Tan}[a+b\,x]}}-\frac{2\,\mathrm{Csc}[a+b\,x]^3}{7\,b\,d\,\sqrt{d\,\mathrm{Tan}[a+b\,x]}}-\frac{1}{21\,b\,d^2}2\,\mathrm{Csc}[a+b\,x]\,\mathrm{EllipticF}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\sqrt{\mathrm{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\mathrm{Tan}[a+b\,x]}$$

Result (type 4, 136 leaves):

$$\left(\mathrm{Csc}[a+b\,x]^3\left(\left(1+10\,\mathrm{Cos}\left[2\,(a+b\,x)\right]+\mathrm{Cos}\left[4\,(a+b\,x)\right]\right)\left(\mathrm{Sec}[a+b\,x]^2\right)^{3/2}-8\,(-1)^{1/4}\,\mathrm{Cos}\left[2\,(a+b\,x)\right]\,\mathrm{EllipticF}\left[i\,\mathrm{ArcSinh}\left[(-1)^{1/4}\sqrt{\mathrm{Tan}[a+b\,x]}\right],\,-1\right]\,\mathrm{Tan}[a+b\,x]^{7/2}\right)\right)\Big/\left(42\,b\,d\,\sqrt{\mathrm{Sec}[a+b\,x]^2}\,\sqrt{d\,\mathrm{Tan}[a+b\,x]}\,\left(-1+\mathrm{Tan}[a+b\,x]^2\right)\right)$$

Problem 108: Result unnecessarily involves imaginary or complex numbers.

$$\int\frac{\mathrm{Sin}[a+b\,x]^7}{(d\,\mathrm{Tan}[a+b\,x])^{5/2}}\,dx$$

Optimal (type 4, 144 leaves, 6 steps):

$$-\frac{\mathrm{Sin}[a+b\,x]^3}{20\,b\,d\,(d\,\mathrm{Tan}[a+b\,x])^{3/2}}-\frac{3\,\mathrm{Sin}[a+b\,x]^5}{70\,b\,d\,(d\,\mathrm{Tan}[a+b\,x])^{3/2}}+\frac{\mathrm{Sin}[a+b\,x]^7}{7\,b\,d\,(d\,\mathrm{Tan}[a+b\,x])^{3/2}}+\frac{3\,\mathrm{EllipticE}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\,\mathrm{Sin}[a+b\,x]}{40\,b\,d^2\,\sqrt{\mathrm{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\mathrm{Tan}[a+b\,x]}}$$

Result (type 4, 206 leaves):

$$\left(\left(-\frac{3}{448}\,\mathrm{Sin}[a+b\,x]-\frac{29\,\mathrm{Sin}\left[3\,(a+b\,x)\right]}{2240}-\frac{9\,\mathrm{Sin}\left[5\,(a+b\,x)\right]}{2240}+\frac{1}{448}\,\mathrm{Sin}\left[7\,(a+b\,x)\right]\right)\mathrm{Tan}[a+b\,x]^3\right)\Big/\left(b\,(d\,\mathrm{Tan}[a+b\,x])^{5/2}\right)+\left(3\,\mathrm{Sec}[a+b\,x]\,\mathrm{Tan}[a+b\,x]^{5/2}\left((-1)^{3/4}\,\mathrm{EllipticE}\left[i\,\mathrm{ArcSinh}\left[(-1)^{1/4}\sqrt{\mathrm{Tan}[a+b\,x]}\right],\,-1\right]-(-1)^{3/4}\,\mathrm{EllipticF}\left[i\,\mathrm{ArcSinh}\left[(-1)^{1/4}\sqrt{\mathrm{Tan}[a+b\,x]}\right],\,-1\right]+\frac{\mathrm{Tan}[a+b\,x]^{3/2}}{\sqrt{1+\mathrm{Tan}[a+b\,x]^2}}\right)\right)\Big/\left(40\,b\,(d\,\mathrm{Tan}[a+b\,x])^{5/2}\sqrt{1+\mathrm{Tan}[a+b\,x]^2}\right)$$

Problem 109: Result unnecessarily involves imaginary or complex numbers.

$$\int\frac{\mathrm{Sin}[a+b\,x]^5}{(d\,\mathrm{Tan}[a+b\,x])^{5/2}}\,dx$$

Optimal (type 4, 114 leaves, 5 steps):

$$-\frac{\text{Sin}[a+b\,x]^3}{10\,b\,d\,(d\,\text{Tan}[a+b\,x])^{3/2}}+\frac{\text{Sin}[a+b\,x]^5}{5\,b\,d\,(d\,\text{Tan}[a+b\,x])^{3/2}}+\frac{3\,\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\,\text{Sin}[a+b\,x]}{20\,b\,d^2\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\text{Tan}[a+b\,x]}}$$

Result (type 4, 151 leaves):

$$-\Bigg(\bigg(\text{Cos}[a+b\,x]\,\Big(-6\,(-1)^{3/4}\,\text{EllipticE}\Big[i\,\text{ArcSinh}\Big[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\Big],\,-1\Big]\,\sqrt{\text{Sec}[a+b\,x]^2}+6\,(-1)^{3/4}\,\text{EllipticF}\Big[i\,\text{ArcSinh}\Big[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\Big],\,-1\Big]\,\sqrt{\text{Sec}[a+b\,x]^2}+(\text{Sin}[4\,(a+b\,x)]-6\,\text{Tan}[a+b\,x])\,\sqrt{\text{Tan}[a+b\,x]}\Big)\sqrt{\text{Tan}[a+b\,x]}\bigg)\Big/\Big(40\,b\,d^2\,\sqrt{d\,\text{Tan}[a+b\,x]}\Big)\Bigg)$$

Problem 110: Result unnecessarily involves imaginary or complex numbers.

$$\int\frac{\text{Sin}[a+b\,x]^3}{(d\,\text{Tan}[a+b\,x])^{5/2}}\,dx$$

Optimal (type 4, 84 leaves, 4 steps):

$$\frac{\text{Sin}[a+b\,x]^3}{3\,b\,d\,(d\,\text{Tan}[a+b\,x])^{3/2}}+\frac{\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\,\text{Sin}[a+b\,x]}{2\,b\,d^2\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\text{Tan}[a+b\,x]}}$$

Result (type 4, 144 leaves):

$$\bigg(\text{Cos}[a+b\,x]\,\sqrt{\text{Tan}[a+b\,x]}\,\Big(3\,(-1)^{3/4}\,\text{EllipticE}\Big[i\,\text{ArcSinh}\Big[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\Big],\,-1\Big]\,\sqrt{\text{Sec}[a+b\,x]^2}-3\,(-1)^{3/4}\,\text{EllipticF}\Big[i\,\text{ArcSinh}\Big[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\Big],\,-1\Big]\,\sqrt{\text{Sec}[a+b\,x]^2}+(4+\text{Cos}[2\,(a+b\,x)])\,\text{Tan}[a+b\,x]^{3/2}\Big)\bigg)\Big/\Big(6\,b\,d^2\,\sqrt{d\,\text{Tan}[a+b\,x]}\Big)$$

Problem 111: Result unnecessarily involves imaginary or complex numbers.

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

Optimal (type 4, 78 leaves, 4 steps):

$$-\frac{2\,\text{Sin}[a+b\,x]}{b\,d\,(d\,\text{Tan}[a+b\,x])^{3/2}}-\frac{3\,\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\,\text{Sin}[a+b\,x]}{b\,d^2\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}\,\sqrt{d\,\text{Tan}[a+b\,x]}}$$

Result (type 4, 142 leaves):

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

Problem 112: Result unnecessarily involves imaginary or complex numbers.

$$\int\frac{\text{Csc}[a+b\,x]}{(d\,\text{Tan}[a+b\,x])^{5/2}}\,dx$$

Optimal (type 4, 110 leaves, 5 steps):

$$-\frac{2\,\text{Csc}[a+b\,x]}{5\,b\,d\,(d\,\text{Tan}[a+b\,x])^{3/2}}+\frac{6\,\text{Cos}[a+b\,x]}{5\,b\,d^2\sqrt{d\,\text{Tan}[a+b\,x]}}+\frac{6\,\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,2\right]\text{Sin}[a+b\,x]}{5\,b\,d^2\sqrt{\text{Sin}[2\,a+2\,b\,x]}\sqrt{d\,\text{Tan}[a+b\,x]}}$$

Result (type 4, 192 leaves):

$$\frac{\left(\frac{8}{5}\text{Csc}[a+b\,x]-\frac{2}{5}\text{Csc}[a+b\,x]^3-\frac{6}{5}\text{Sin}[a+b\,x]\right)\text{Tan}[a+b\,x]^3}{b\,(d\,\text{Tan}[a+b\,x])^{5/2}}+$$
$$\left(6\,\text{Sec}[a+b\,x]\,\text{Tan}[a+b\,x]^{5/2}\left((-1)^{3/4}\,\text{EllipticE}\left[\mathrm{i}\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]-\right.\right.$$
$$\left.\left.(-1)^{3/4}\,\text{EllipticF}\left[\mathrm{i}\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]+\frac{\text{Tan}[a+b\,x]^{3/2}}{\sqrt{1+\text{Tan}[a+b\,x]^2}}\right)\right)\Big/$$
$$\left(5\,b\,(d\,\text{Tan}[a+b\,x])^{5/2}\sqrt{1+\text{Tan}[a+b\,x]^2}\right)$$

Problem 113: Result unnecessarily involves imaginary or complex numbers.

$$\int\frac{\text{Csc}[a+b\,x]^3}{(d\,\text{Tan}[a+b\,x])^{5/2}}\,dx$$

Optimal (type 4, 140 leaves, 6 steps):

$$\frac{2\,\text{Csc}[a+b\,x]}{15\,b\,d\,(d\,\text{Tan}[a+b\,x])^{3/2}}-\frac{2\,\text{Csc}[a+b\,x]^3}{9\,b\,d\,(d\,\text{Tan}[a+b\,x])^{3/2}}+$$
$$\frac{4\,\text{Cos}[a+b\,x]}{15\,b\,d^2\sqrt{d\,\text{Tan}[a+b\,x]}}+\frac{4\,\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,2\right]\text{Sin}[a+b\,x]}{15\,b\,d^2\sqrt{\text{Sin}[2\,a+2\,b\,x]}\sqrt{d\,\text{Tan}[a+b\,x]}}$$

Result (type 4, 204 leaves):

$$\left(\left(\frac{2}{15}\,\text{Csc}[a+b\,x]+\frac{16}{45}\,\text{Csc}[a+b\,x]^3-\frac{2}{9}\,\text{Csc}[a+b\,x]^5-\frac{4}{15}\,\text{Sin}[a+b\,x]\right)\text{Tan}[a+b\,x]^3\right)\Big/\left(b\,(d\,\text{Tan}[a+b\,x])^{5/2}\right)+\left(4\,\text{Sec}[a+b\,x]\,\text{Tan}[a+b\,x]^{5/2}\left((-1)^{3/4}\,\text{EllipticE}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]-(-1)^{3/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]+\frac{\text{Tan}[a+b\,x]^{3/2}}{\sqrt{1+\text{Tan}[a+b\,x]^2}}\right)\right)\Big/\left(15\,b\,(d\,\text{Tan}[a+b\,x])^{5/2}\sqrt{1+\text{Tan}[a+b\,x]^2}\right)$$

Problem 115: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 88 leaves, 3 steps):

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

Result (type 5, 77 leaves):

$$-\left(\left(2\,b\left(\left(\text{Cos}[e+f\,x]^2\right)^{1/4}-\text{Hypergeometric2F1}\left[\frac{1}{2},\frac{3}{4},\frac{3}{2},\text{Sin}[e+f\,x]^2\right]\right)(a\,\text{Sin}[e+f\,x])^{3/2}\right)\Big/\left(3\,f\left(\text{Cos}[e+f\,x]^2\right)^{1/4}\sqrt{b\,\text{Tan}[e+f\,x]}\right)\right)$$

Problem 117: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 50 leaves, 2 steps):

$$\frac{2\sqrt{\text{Cos}[e+f\,x]}\,\text{EllipticF}\left[\frac{1}{2}(e+f\,x),2\right]\sqrt{b\,\text{Tan}[e+f\,x]}}{f\sqrt{a\,\text{Sin}[e+f\,x]}}$$

Result (type 5, 69 leaves):

$$\left(\text{Hypergeometric2F1}\left[\frac{1}{2},\frac{3}{4},\frac{3}{2},\text{Sin}[e+f\,x]^2\right]\text{Sin}[2\,(e+f\,x)]\sqrt{b\,\text{Tan}[e+f\,x]}\right)\Big/\left(2\,f\left(\text{Cos}[e+f\,x]^2\right)^{1/4}\sqrt{a\,\text{Sin}[e+f\,x]}\right)$$

Problem 118: Result unnecessarily involves higher level functions.

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

Optimal (type 3, 107 leaves, 7 steps):

$$-\frac{\operatorname{ArcTan}\left[\sqrt{\operatorname{Cos}[e+f x]}\right] \sqrt{\operatorname{Cos}[e+f x]} \sqrt{b \operatorname{Tan}[e+f x]}}{a f \sqrt{a \operatorname{Sin}[e+f x]}}-\frac{\operatorname{ArcTanh}\left[\sqrt{\operatorname{Cos}[e+f x]}\right] \sqrt{\operatorname{Cos}[e+f x]} \sqrt{b \operatorname{Tan}[e+f x]}}{a f \sqrt{a \operatorname{Sin}[e+f x]}}$$

Result (type 5, 66 leaves):

$$-\left(\left(2 \left(-\operatorname{Cot}[e+f x]^2\right)^{3/4} \operatorname{Hypergeometric2F1}\left[\frac{3}{4}, \frac{3}{4}, \frac{7}{4}, \operatorname{Csc}[e+f x]^2\right] (b \operatorname{Tan}[e+f x])^{3/2}\right) \Big/ \left(3 b f (a \operatorname{Sin}[e+f x])^{3/2}\right)\right)$$

Problem 119: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 86 leaves, 3 steps):

$$-\frac{b}{a^2 f \sqrt{a \operatorname{Sin}[e+f x]} \sqrt{b \operatorname{Tan}[e+f x]}}+\frac{\sqrt{\operatorname{Cos}[e+f x]} \operatorname{EllipticF}\left[\frac{1}{2} (e+f x), 2\right] \sqrt{b \operatorname{Tan}[e+f x]}}{a^2 f \sqrt{a \operatorname{Sin}[e+f x]}}$$

Result (type 5, 89 leaves):

$$\left(b \left(-2 \left(\operatorname{Cos}[e+f x]^2\right)^{1/4}+\operatorname{Hypergeometric2F1}\left[\frac{1}{2}, \frac{3}{4}, \frac{3}{2}, \operatorname{Sin}[e+f x]^2\right] \operatorname{Sin}[e+f x]^2\right)\right) \Big/ \left(2 a^2 f \left(\operatorname{Cos}[e+f x]^2\right)^{1/4} \sqrt{a \operatorname{Sin}[e+f x]} \sqrt{b \operatorname{Tan}[e+f x]}\right)$$

Problem 120: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 126 leaves, 4 steps):

$$-\frac{24 a^2 b^2 \operatorname{EllipticE}\left[\frac{1}{2} (e+f x), 2\right] \sqrt{a \operatorname{Sin}[e+f x]}}{5 f \sqrt{\operatorname{Cos}[e+f x]} \sqrt{b \operatorname{Tan}[e+f x]}}+\frac{12 a^2 b \sqrt{a \operatorname{Sin}[e+f x]} \sqrt{b \operatorname{Tan}[e+f x]}}{5 f}-\frac{2 b (a \operatorname{Sin}[e+f x])^{5/2} \sqrt{b \operatorname{Tan}[e+f x]}}{5 f}$$

Result (type 5, 99 leaves):

$$\left(a^2 b \left(\left(\text{Cos}[e+f x]^2\right)^{3/4} \left(11+\text{Cos}[2 (e+f x)]\right) - 12\, \text{Cos}[e+f x]^2\, \text{Hypergeometric2F1}\left[\frac{1}{4}, \frac{1}{2}, \frac{3}{2}, \text{Sin}[e+f x]^2\right]\right) \sqrt{a\, \text{Sin}[e+f x]}\, \sqrt{b\, \text{Tan}[e+f x]}\right) \Big/ \left(5 f \left(\text{Cos}[e+f x]^2\right)^{3/4}\right)$$

Problem 122: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 84 leaves, 3 steps):

$$-\frac{4 b^2\, \text{EllipticE}\left[\frac{1}{2} (e+f x), 2\right] \sqrt{a\, \text{Sin}[e+f x]}}{f \sqrt{\text{Cos}[e+f x]}\, \sqrt{b\, \text{Tan}[e+f x]}} + \frac{2 b \sqrt{a\, \text{Sin}[e+f x]}\, \sqrt{b\, \text{Tan}[e+f x]}}{f}$$

Result (type 5, 83 leaves):

$$\left(2 b \left(\left(\text{Cos}[e+f x]^2\right)^{3/4} - \text{Cos}[e+f x]^2\, \text{Hypergeometric2F1}\left[\frac{1}{4}, \frac{1}{2}, \frac{3}{2}, \text{Sin}[e+f x]^2\right]\right) \sqrt{a\, \text{Sin}[e+f x]}\, \sqrt{b\, \text{Tan}[e+f x]}\right) \Big/ \left(f \left(\text{Cos}[e+f x]^2\right)^{3/4}\right)$$

Problem 124: Result unnecessarily involves higher level functions.

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

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

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

Result (type 5, 92 leaves):

$$\left(\left(2\, \text{Cos}[e+f x] \left(\text{Cos}[e+f x]^2\right)^{3/4} - \text{Cos}[e+f x]^3\, \text{Hypergeometric2F1}\left[\frac{1}{4}, \frac{1}{2}, \frac{3}{2}, \text{Sin}[e+f x]^2\right]\right) \left(b\, \text{Tan}[e+f x]\right)^{3/2}\right) \Big/ \left(a f \left(\text{Cos}[e+f x]^2\right)^{3/4} \sqrt{a\, \text{Sin}[e+f x]}\right)$$

Problem 125: Result unnecessarily involves higher level functions.

$$\int \frac{\left(b\, \text{Tan}[e+f x]\right)^{3/2}}{\left(a\, \text{Sin}[e+f x]\right)^{5/2}} \, dx$$

Optimal (type 3, 145 leaves, 8 steps):

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

Result (type 5, 68 leaves):

$$-\left(\left(2\,b\left(-1+\left(-\text{Cot}[e+f x]^2\right)^{1/4}\text{Hypergeometric2F1}\left[\frac{1}{4},\frac{1}{4},\frac{5}{4},\text{Csc}[e+f x]^2\right]\right)\sqrt{b\,\text{Tan}[e+f x]}\right)\Big/\left(a^2\,f\,\sqrt{a\,\text{Sin}[e+f x]}\right)\right)$$

Problem 126: Result unnecessarily involves higher level functions.

$$\int\frac{(a\,\text{Sin}[e+f x])^{9/2}}{\sqrt{b\,\text{Tan}[e+f x]}}\,dx$$

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

$$-\frac{4\,a^2\,b\,(a\,\text{Sin}[e+f x])^{5/2}}{15\,f\,(b\,\text{Tan}[e+f x])^{3/2}}-\frac{2\,b\,(a\,\text{Sin}[e+f x])^{9/2}}{9\,f\,(b\,\text{Tan}[e+f x])^{3/2}}+\frac{8\,a^4\,\text{EllipticE}\left[\frac{1}{2}\,(e+f x),2\right]\sqrt{a\,\text{Sin}[e+f x]}}{15\,f\,\sqrt{\text{Cos}[e+f x]}\,\sqrt{b\,\text{Tan}[e+f x]}}$$

Result (type 5, 100 leaves):

$$\left(a^4\left(\left(\text{Cos}[e+f x]^2\right)^{3/4}(-17+5\,\text{Cos}[2\,(e+f x)])+12\,\text{Hypergeometric2F1}\left[\frac{1}{4},\frac{1}{2},\frac{3}{2},\text{Sin}[e+f x]^2\right]\right)\sqrt{a\,\text{Sin}[e+f x]}\,\text{Sin}[2\,(e+f x)]\right)\Big/\left(90\,f\left(\text{Cos}[e+f x]^2\right)^{3/4}\sqrt{b\,\text{Tan}[e+f x]}\right)$$

Problem 128: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 88 leaves, 3 steps):

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

Result (type 5, 87 leaves):

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

Problem 130: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 50 leaves, 2 steps):

$$\frac{2 \operatorname{EllipticE}\left[\frac{1}{2} (e+f x), 2\right] \sqrt{a \operatorname{Sin}[e+f x]}}{f \sqrt{\operatorname{Cos}[e+f x]} \sqrt{b \operatorname{Tan}[e+f x]}}$$

Result (type 5, 69 leaves):

$$\left(\text{Hypergeometric2F1}\left[\frac{1}{4}, \frac{1}{2}, \frac{3}{2}, \operatorname{Sin}[e+f x]^2\right] \sqrt{a \operatorname{Sin}[e+f x]} \operatorname{Sin}[2 (e+f x)]\right) \Big/ \left(2 f \left(\operatorname{Cos}[e+f x]^2\right)^{3/4} \sqrt{b \operatorname{Tan}[e+f x]}\right)$$

Problem 131: Result unnecessarily involves higher level functions.

$$\int \frac{1}{\sqrt{a \operatorname{Sin}[e+f x]} \sqrt{b \operatorname{Tan}[e+f x]}} \, dx$$

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

$$\frac{\operatorname{ArcTan}\left[\sqrt{\operatorname{Cos}[e+f x]}\right] \sqrt{a \operatorname{Sin}[e+f x]}}{a f \sqrt{\operatorname{Cos}[e+f x]} \sqrt{b \operatorname{Tan}[e+f x]}} - \frac{\operatorname{ArcTanh}\left[\sqrt{\operatorname{Cos}[e+f x]}\right] \sqrt{a \operatorname{Sin}[e+f x]}}{a f \sqrt{\operatorname{Cos}[e+f x]} \sqrt{b \operatorname{Tan}[e+f x]}}$$

Result (type 5, 64 leaves):

$$-\left(\left(2 \left(-\operatorname{Cot}[e+f x]^2\right)^{1/4} \text{Hypergeometric2F1}\left[\frac{1}{4}, \frac{1}{4}, \frac{5}{4}, \operatorname{Csc}[e+f x]^2\right] \sqrt{b \operatorname{Tan}[e+f x]}\right) \Big/ \left(b f \sqrt{a \operatorname{Sin}[e+f x]}\right)\right)$$

Problem 132: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 87 leaves, 3 steps):

$$-\frac{b \sqrt{a \operatorname{Sin}[e+f x]}}{a^2 f (b \operatorname{Tan}[e+f x])^{3/2}} - \frac{\operatorname{EllipticE}\left[\frac{1}{2} (e+f x), 2\right] \sqrt{a \operatorname{Sin}[e+f x]}}{a^2 f \sqrt{\operatorname{Cos}[e+f x]} \sqrt{b \operatorname{Tan}[e+f x]}}$$

Result (type 5, 89 leaves):

$$-\left(\left(b\sqrt{a\,\text{Sin}[e+f\,x]}\left(2\,\left(\text{Cos}[e+f\,x]^2\right)^{3/4}+\text{Hypergeometric2F1}\left[\frac{1}{4},\frac{1}{2},\frac{3}{2},\text{Sin}[e+f\,x]^2\right]\text{Sin}[e+f\,x]^2\right)\right)\Big/\left(2\,a^2\,f\,\left(\text{Cos}[e+f\,x]^2\right)^{3/4}\,(b\,\text{Tan}[e+f\,x])^{3/2}\right)\right)$$

Problem 133: Result unnecessarily involves higher level functions.

$$\int \frac{1}{(a\,\text{Sin}[e+f\,x])^{5/2}\sqrt{b\,\text{Tan}[e+f\,x]}}\,dx$$

Optimal (type 3, 146 leaves, 8 steps):

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

Result (type 5, 82 leaves):

$$-\left(\left(\left(\text{Cot}[e+f\,x]^2+\left(-\text{Cot}[e+f\,x]^2\right)^{1/4}\text{Hypergeometric2F1}\left[\frac{1}{4},\frac{1}{4},\frac{5}{4},\text{Csc}[e+f\,x]^2\right]\right)\text{Sec}[e+f\,x]\,\sqrt{a\,\text{Sin}[e+f\,x]}\right)\Big/\left(2\,a^3\,f\,\sqrt{b\,\text{Tan}[e+f\,x]}\right)\right)$$

Problem 137: Result unnecessarily involves higher level functions.

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

Optimal (type 3, 141 leaves, 8 steps):

$$\frac{2\sqrt{a\,\text{Sin}[e+f\,x]}}{b\,f\,\sqrt{b\,\text{Tan}[e+f\,x]}}-\frac{a\,\text{ArcTan}\left[\sqrt{\text{Cos}[e+f\,x]}\right]\sqrt{\text{Cos}[e+f\,x]}\,\sqrt{b\,\text{Tan}[e+f\,x]}}{b^2\,f\,\sqrt{a\,\text{Sin}[e+f\,x]}}-\frac{a\,\text{ArcTanh}\left[\sqrt{\text{Cos}[e+f\,x]}\right]\sqrt{\text{Cos}[e+f\,x]}\,\sqrt{b\,\text{Tan}[e+f\,x]}}{b^2\,f\,\sqrt{a\,\text{Sin}[e+f\,x]}}$$

Result (type 5, 87 leaves):

$$\left(2\left(3\,\text{Cos}[e+f\,x]^2-\left(-\text{Cot}[e+f\,x]^2\right)^{3/4}\text{Hypergeometric2F1}\left[\frac{3}{4},\frac{3}{4},\frac{7}{4},\text{Csc}[e+f\,x]^2\right]\right)\text{Sec}[e+f\,x]^2\,\sqrt{a\,\text{Sin}[e+f\,x]}\right)\Big/\left(3\,b\,f\,\sqrt{b\,\text{Tan}[e+f\,x]}\right)$$

Problem 138: Result unnecessarily involves higher level functions.

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

Optimal (type 3, 151 leaves, 8 steps):

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

Result (type 5, 70 leaves):

$$\frac{-3-\frac{\operatorname{Hypergeometric2F1}\left[\frac{3}{4},\frac{3}{4},\frac{7}{4},\operatorname{Csc}[e+f x]^2\right]}{\left(-\operatorname{Cot}[e+f x]^2\right)^{1/4}}}{6 b f (a \operatorname{Sin}[e+f x])^{3/2} \sqrt{b \operatorname{Tan}[e+f x]}}$$

Problem 139: Result unnecessarily involves higher level functions.

$$\int \frac{(a \operatorname{Sin}[e+f x])^{11/2}}{(b \operatorname{Tan}[e+f x])^{3/2}} \, dx$$

Optimal (type 4, 167 leaves, 5 steps):

$$-\frac{4 a^4 (a \operatorname{Sin}[e+f x])^{3/2}}{77 b f \sqrt{b \operatorname{Tan}[e+f x]}}-\frac{2 a^2 (a \operatorname{Sin}[e+f x])^{7/2}}{77 b f \sqrt{b \operatorname{Tan}[e+f x]}}+\frac{2 (a \operatorname{Sin}[e+f x])^{11/2}}{11 b f \sqrt{b \operatorname{Tan}[e+f x]}}+\frac{8 a^6 \sqrt{\operatorname{Cos}[e+f x]} \operatorname{EllipticF}\left[\frac{1}{2} (e+f x), 2\right] \sqrt{b \operatorname{Tan}[e+f x]}}{77 b^2 f \sqrt{a \operatorname{Sin}[e+f x]}}$$

Result (type 5, 106 leaves):

$$\left(a^4 \left(2 \left(\operatorname{Cos}[e+f x]^2\right)^{1/4} (1-24 \operatorname{Cos}[2 (e+f x)]+7 \operatorname{Cos}[4 (e+f x)])+32 \operatorname{Hypergeometric2F1}\left[\frac{1}{2},\frac{3}{4},\frac{3}{2},\operatorname{Sin}[e+f x]^2\right]\right) (a \operatorname{Sin}[e+f x])^{3/2}\right) \Big/ \left(616 b f \left(\operatorname{Cos}[e+f x]^2\right)^{1/4} \sqrt{b \operatorname{Tan}[e+f x]}\right)$$

Problem 140: Result unnecessarily involves higher level functions.

$$\int \frac{(a \operatorname{Sin}[e+f x])^{7/2}}{(b \operatorname{Tan}[e+f x])^{3/2}} \, dx$$

Optimal (type 4, 130 leaves, 4 steps):

$$-\frac{2 a^2 (a \operatorname{Sin}[e+f x])^{3/2}}{21 b f \sqrt{b \operatorname{Tan}[e+f x]}}+\frac{2 (a \operatorname{Sin}[e+f x])^{7/2}}{7 b f \sqrt{b \operatorname{Tan}[e+f x]}}+\frac{4 a^4 \sqrt{\operatorname{Cos}[e+f x]}\ \operatorname{EllipticF}\left[\frac{1}{2} (e+f x), 2\right] \sqrt{b \operatorname{Tan}[e+f x]}}{21 b^2 f \sqrt{a \operatorname{Sin}[e+f x]}}$$

Result (type 5, 95 leaves):

$$-\left(\left(a^2 \left(\left(\operatorname{Cos}[e+f x]^2\right)^{1/4} (-1+3 \operatorname{Cos}[2 (e+f x)])-2 \operatorname{Hypergeometric2F1}\left[\frac{1}{2}, \frac{3}{4}, \frac{3}{2}, \operatorname{Sin}[e+f x]^2\right]\right) (a \operatorname{Sin}[e+f x])^{3/2}\right) \Big/ \left(21 b f \left(\operatorname{Cos}[e+f x]^2\right)^{1/4} \sqrt{b \operatorname{Tan}[e+f x]}\right)\right)$$

Problem 141: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 93 leaves, 3 steps):

$$\frac{2 (a \operatorname{Sin}[e+f x])^{3/2}}{3 b f \sqrt{b \operatorname{Tan}[e+f x]}}+\frac{2 a^2 \sqrt{\operatorname{Cos}[e+f x]}\ \operatorname{EllipticF}\left[\frac{1}{2} (e+f x), 2\right] \sqrt{b \operatorname{Tan}[e+f x]}}{3 b^2 f \sqrt{a \operatorname{Sin}[e+f x]}}$$

Result (type 5, 79 leaves):

$$\left(\left(2 \left(\operatorname{Cos}[e+f x]^2\right)^{1/4}+\operatorname{Hypergeometric2F1}\left[\frac{1}{2}, \frac{3}{4}, \frac{3}{2}, \operatorname{Sin}[e+f x]^2\right]\right) (a \operatorname{Sin}[e+f x])^{3/2}\right) \Big/ \left(3 b f \left(\operatorname{Cos}[e+f x]^2\right)^{1/4} \sqrt{b \operatorname{Tan}[e+f x]}\right)$$

Problem 142: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 86 leaves, 3 steps):

$$-\frac{1}{b f \sqrt{a \operatorname{Sin}[e+f x]}\ \sqrt{b \operatorname{Tan}[e+f x]}}-\frac{\sqrt{\operatorname{Cos}[e+f x]}\ \operatorname{EllipticF}\left[\frac{1}{2} (e+f x), 2\right] \sqrt{b \operatorname{Tan}[e+f x]}}{b^2 f \sqrt{a \operatorname{Sin}[e+f x]}}$$

Result (type 5, 89 leaves):

$$\left(-2 \left(\operatorname{Cos}[e+f x]^2\right)^{1/4}-\operatorname{Hypergeometric2F1}\left[\frac{1}{2}, \frac{3}{4}, \frac{3}{2}, \operatorname{Sin}[e+f x]^2\right] \operatorname{Sin}[e+f x]^2\right) \Big/ \left(2 b f \left(\operatorname{Cos}[e+f x]^2\right)^{1/4} \sqrt{a \operatorname{Sin}[e+f x]}\ \sqrt{b \operatorname{Tan}[e+f x]}\right)$$

Problem 143: Result unnecessarily involves higher level functions.

$$\int \frac{1}{(a \operatorname{Sin}[e+f x])^{5/2} (b \operatorname{Tan}[e+f x])^{3/2}}\, dx$$

Optimal (type 4, 130 leaves, 4 steps):

$$-\frac{1}{3\,b\,f\,(a\,\mathrm{Sin}[e+f\,x])^{5/2}\sqrt{b\,\mathrm{Tan}[e+f\,x]}}+\frac{1}{6\,a^2\,b\,f\,\sqrt{a\,\mathrm{Sin}[e+f\,x]}\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}}-\frac{\sqrt{\mathrm{Cos}[e+f\,x]}\;\mathrm{EllipticF}\left[\frac{1}{2}\,(e+f\,x),\,2\right]\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{6\,a^2\,b^2\,f\,\sqrt{a\,\mathrm{Sin}[e+f\,x]}}$$

Result (type 5, 104 leaves):

$$\left(2\,(\mathrm{Cos}[e+f\,x]^2)^{1/4}\,(1-2\,\mathrm{Csc}[e+f\,x]^2)-\mathrm{Hypergeometric2F1}\left[\frac{1}{2},\,\frac{3}{4},\,\frac{3}{2},\,\mathrm{Sin}[e+f\,x]^2\right]\mathrm{Sin}[e+f\,x]^2\right)\Big/\left(12\,a^2\,b\,f\,(\mathrm{Cos}[e+f\,x]^2)^{1/4}\sqrt{a\,\mathrm{Sin}[e+f\,x]}\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}\right)$$

Problem 144: Result unnecessarily involves higher level functions.

$$\int \frac{1}{(a\,\mathrm{Sin}[e+f\,x])^{9/2}\,(b\,\mathrm{Tan}[e+f\,x])^{3/2}}\,dx$$

Optimal (type 4, 167 leaves, 5 steps):

$$-\frac{1}{5\,b\,f\,(a\,\mathrm{Sin}[e+f\,x])^{9/2}\sqrt{b\,\mathrm{Tan}[e+f\,x]}}+\frac{1}{30\,a^2\,b\,f\,(a\,\mathrm{Sin}[e+f\,x])^{5/2}\sqrt{b\,\mathrm{Tan}[e+f\,x]}}+\frac{1}{12\,a^4\,b\,f\,\sqrt{a\,\mathrm{Sin}[e+f\,x]}\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}}-\frac{\sqrt{\mathrm{Cos}[e+f\,x]}\;\mathrm{EllipticF}\left[\frac{1}{2}\,(e+f\,x),\,2\right]\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{12\,a^4\,b^2\,f\,\sqrt{a\,\mathrm{Sin}[e+f\,x]}}$$

Result (type 5, 114 leaves):

$$\left(2\,(\mathrm{Cos}[e+f\,x]^2)^{1/4}\,(5+2\,\mathrm{Csc}[e+f\,x]^2-12\,\mathrm{Csc}[e+f\,x]^4)-5\,\mathrm{Hypergeometric2F1}\left[\frac{1}{2},\,\frac{3}{4},\,\frac{3}{2},\,\mathrm{Sin}[e+f\,x]^2\right]\mathrm{Sin}[e+f\,x]^2\right)\Big/\left(120\,a^4\,b\,f\,(\mathrm{Cos}[e+f\,x]^2)^{1/4}\sqrt{a\,\mathrm{Sin}[e+f\,x]}\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}\right)$$

Problem 173: Result more than twice size of optimal antiderivative.

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

Optimal (type 5, 79 leaves, 2 steps):

$$-\left(\left(2\,\mathrm{Hypergeometric2F1}\left[-\frac{1}{4},\,\frac{1}{4}\,(-1+2\,m),\,\frac{1}{4}\,(3+2\,m),\,\mathrm{Sin}[e+f\,x]^2\right](a\,\mathrm{Sin}[e+f\,x])^m\right)\Big/\left(b\,f\,(1-2\,m)\,(\mathrm{Cos}[e+f\,x]^2)^{1/4}\sqrt{b\,\mathrm{Tan}[e+f\,x]}\right)\right)$$

Result (type 5, 224 leaves):

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

Problem 174: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

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

Optimal (type 5, 83 leaves, 2 steps):

$$\frac{1}{b f (1+m+n)} \left(\text{Cos}[e+f x]^2\right)^{\frac{1+n}{2}} \text{Hypergeometric2F1}\left[\frac{1+n}{2}, \frac{1}{2}(1+m+n), \frac{1}{2}(3+m+n), \text{Sin}[e+f x]^2\right] (a \text{Sin}[e+f x])^m (b \text{Tan}[e+f x])^{1+n}$$

Result (type 6, 2107 leaves):

$$\left((3+m+n) \text{AppellF1}\left[\frac{1}{2}(1+m+n), n, 1+m, \frac{1}{2}(3+m+n), \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sin}[e+f x]^{1+m} (a \text{Sin}[e+f x])^m \text{Tan}[e+f x]^n (b \text{Tan}[e+f x])^n\right) \Big/$$
$$\left(f (1+m+n) \left((3+m+n) \text{AppellF1}\left[\frac{1}{2}(1+m+n), n, 1+m, \frac{1}{2}(3+m+n), \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] - 2 \left((1+m) \text{AppellF1}\left[\frac{1}{2}(3+m+n), n, 2+m, \frac{1}{2}(5+m+n), \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] - n \text{AppellF1}\left[\frac{1}{2}(3+m+n), 1+n, 1+m, \frac{1}{2}(5+m+n), \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right.$$
$$\left(\left(n (3+m+n) \text{AppellF1}\left[\frac{1}{2}(1+m+n), n, 1+m, \frac{1}{2}(3+m+n), \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}[e+f x]^2 \text{Sin}[e+f x]^{1+m} \text{Tan}[e+f x]^{-1+n}\right) \Big/\right.$$
$$\left((1+m+n) \left((3+m+n) \text{AppellF1}\left[\frac{1}{2}(1+m+n), n, 1+m, \frac{1}{2}(3+m+n), \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.\right.\right.$$

$$-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]-2\,\Big((1+m)\,\mathrm{AppellF1}\Big[\frac{1}{2}\,(3+m+n),\,n,\,2+m,\,\frac{1}{2}\,(5+m+n),$$

$$\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]-n\,\mathrm{AppellF1}\Big[\frac{1}{2}\,(3+m+n),\,1+n,\,1+$$

$$m,\,\frac{1}{2}\,(5+m+n),\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Big)\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)\Big)+$$

$$\Big((1+m)\,(3+m+n)\,\mathrm{AppellF1}\Big[\frac{1}{2}\,(1+m+n),\,n,\,1+m,\,\frac{1}{2}\,(3+m+n),\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

$$-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\mathrm{Cos}[e+f\,x]\,\mathrm{Sin}[e+f\,x]^m\,\mathrm{Tan}[e+f\,x]^n\Big)\Big/$$

$$\Big((1+m+n)\,\Big((3+m+n)\,\mathrm{AppellF1}\Big[\frac{1}{2}\,(1+m+n),\,n,\,1+m,\,\frac{1}{2}\,(3+m+n),\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

$$-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]-2\,\Big((1+m)\,\mathrm{AppellF1}\Big[\frac{1}{2}\,(3+m+n),\,n,\,2+m,\,\frac{1}{2}\,(5+m+n),$$

$$\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]-n\,\mathrm{AppellF1}\Big[\frac{1}{2}\,(3+m+n),\,1+n,\,1+$$

$$m,\,\frac{1}{2}\,(5+m+n),\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Big)\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)\Big)+$$

$$\Big((3+m+n)\,\mathrm{Sin}[e+f\,x]^{1+m}\,\Big(-\frac{1}{3+m+n}(1+m)\,(1+m+n)\,\mathrm{AppellF1}\Big[1+\frac{1}{2}\,(1+m+n),$$

$$n,\,2+m,\,1+\frac{1}{2}\,(3+m+n),\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]$$

$$\mathrm{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]+\frac{1}{3+m+n}n\,(1+m+n)$$

$$\mathrm{AppellF1}\Big[1+\frac{1}{2}\,(1+m+n),\,1+n,\,1+m,\,1+\frac{1}{2}\,(3+m+n),\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

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

$$\Big((1+m+n)\,\Big((3+m+n)\,\mathrm{AppellF1}\Big[\frac{1}{2}\,(1+m+n),\,n,\,1+m,\,\frac{1}{2}\,(3+m+n),\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

$$-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]-2\,\Big((1+m)\,\mathrm{AppellF1}\Big[\frac{1}{2}\,(3+m+n),\,n,\,2+m,\,\frac{1}{2}\,(5+m+n),$$

$$\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]-n\,\mathrm{AppellF1}\Big[\frac{1}{2}\,(3+m+n),\,1+n,\,1+$$

$$m,\,\frac{1}{2}\,(5+m+n),\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Big)\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)\Big)-$$

$$\Big((3+m+n)\,\mathrm{AppellF1}\Big[\frac{1}{2}\,(1+m+n),\,n,\,1+m,\,\frac{1}{2}\,(3+m+n),\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

$$-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\mathrm{Sin}[e+f\,x]^{1+m}$$

$$\Big(-2\,\Big((1+m)\,\mathrm{AppellF1}\Big[\frac{1}{2}\,(3+m+n),\,n,\,2+m,\,\frac{1}{2}\,(5+m+n),\,\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

$$-\mathrm{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]-n\,\mathrm{AppellF1}\Big[\frac{1}{2}\,(3+m+n),\,1+n,\,1+m,\,\frac{1}{2}\,(5+m+n),$$

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

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

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

Problem 175: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Sin}[e+fx]^4\,(b\,\text{Tan}[e+fx])^n\,dx$$

Optimal (type 5, 50 leaves, 2 steps):

$$\frac{\text{Hypergeometric2F1}\left[3,\frac{5+n}{2},\frac{7+n}{2},-\text{Tan}[e+fx]^2\right](b\,\text{Tan}[e+fx])^{5+n}}{b^5 f(5+n)}$$

Result (type 6, 7770 leaves):

$$\Bigg(2^{5+n}\,(3+n)\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]\left(-\frac{\mathrm{Tan}\big[\frac{1}{2}\,(e+f\,x)\big]}{-1+\mathrm{Tan}\big[\frac{1}{2}\,(e+f\,x)\big]^2}\right)^n$$

$$\Bigg(\Bigg(\mathrm{AppellF1}\Big[\tfrac{1+n}{2},\,n,\,3,\,\tfrac{3+n}{2},\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Big]$$

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

$$\Bigg((3+n)\,\mathrm{AppellF1}\Big[\tfrac{1+n}{2},\,n,\,3,\,\tfrac{3+n}{2},\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Big]+$$

$$2\,\Bigg(-3\,\mathrm{AppellF1}\Big[\tfrac{3+n}{2},\,n,\,4,\,\tfrac{5+n}{2},\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Big]+n\,\mathrm{AppellF1}\Big[$$

$$\tfrac{3+n}{2},\,1+n,\,3,\,\tfrac{5+n}{2},\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Big]\Bigg)\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Bigg)-$$

$$\Bigg(2\,\mathrm{AppellF1}\Big[\tfrac{1+n}{2},\,n,\,4,\,\tfrac{3+n}{2},\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Big]$$

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

$$\Bigg((3+n)\,\mathrm{AppellF1}\Big[\tfrac{1+n}{2},\,n,\,4,\,\tfrac{3+n}{2},\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Big]+$$

$$2\,\Bigg(-4\,\mathrm{AppellF1}\Big[\tfrac{3+n}{2},\,n,\,5,\,\tfrac{5+n}{2},\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Big]+n\,\mathrm{AppellF1}\Big[$$

$$\tfrac{3+n}{2},\,1+n,\,4,\,\tfrac{5+n}{2},\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Big]\Bigg)\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Bigg)+$$

$$\mathrm{AppellF1}\Big[\tfrac{1+n}{2},\,n,\,5,\,\tfrac{3+n}{2},\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Big]\Big/$$

$$\Bigg((3+n)\,\mathrm{AppellF1}\Big[\tfrac{1+n}{2},\,n,\,5,\,\tfrac{3+n}{2},\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Big]+$$

$$2\,\Bigg(-5\,\mathrm{AppellF1}\Big[\tfrac{3+n}{2},\,n,\,6,\,\tfrac{5+n}{2},\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Big]+n\,\mathrm{AppellF1}\Big[$$

$$\tfrac{3+n}{2},\,1+n,\,5,\,\tfrac{5+n}{2},\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Big]\Bigg)\,\mathrm{Tan}\Big[\tfrac{1}{2}\,(e+f\,x)\Big]^2\Bigg)\Bigg)$$

$$\mathrm{Tan}[e+f\,x]^{-n}\,(b\,\mathrm{Tan}[e+f\,x])^n\,\Bigg(-\frac{1}{16}\,\mathrm{i}\,\mathrm{Sin}\big[4\,(e+f\,x)\big]\,\mathrm{Tan}[e+f\,x]^n-$$

$$\frac{1}{4}\,\mathrm{Sin}\big[2\,(e+f\,x)\big]\,\mathrm{Sin}\big[4\,(e+f\,x)\big]\,\mathrm{Tan}[e+f\,x]^n+$$

$$\frac{3}{8}\,\mathrm{i}\,\mathrm{Sin}\big[2\,(e+f\,x)\big]^2\,\mathrm{Sin}\big[4\,(e+f\,x)\big]\,\mathrm{Tan}[e+f\,x]^n+$$

$$\frac{1}{4}\,\mathrm{Sin}\big[2\,(e+f\,x)\big]^3\,\mathrm{Sin}\big[4\,(e+f\,x)\big]\,\mathrm{Tan}[e+f\,x]^n-$$

$$\frac{1}{16}\,\mathrm{i}\,\mathrm{Sin}\big[2\,(e+f\,x)\big]^4\,\mathrm{Sin}\big[4\,(e+f\,x)\big]\,\mathrm{Tan}[e+f\,x]^n+\mathrm{Cos}\big[4\,(e+f\,x)\big]$$

$$\Bigg(\frac{1}{16}\,\mathrm{Tan}[e+f\,x]^n-\frac{1}{4}\,\mathrm{i}\,\mathrm{Sin}\big[2\,(e+f\,x)\big]\,\mathrm{Tan}[e+f\,x]^n-\frac{3}{8}\,\mathrm{Sin}\big[2\,(e+f\,x)\big]^2\,\mathrm{Tan}[e+f\,x]^n+$$

$$\frac{1}{4}\,\mathrm{i}\,\mathrm{Sin}\big[2\,(e+f\,x)\big]^3\,\mathrm{Tan}[e+f\,x]^n+\frac{1}{16}\,\mathrm{Sin}\big[2\,(e+f\,x)\big]^4\,\mathrm{Tan}[e+f\,x]^n\Bigg)+$$

$$\mathrm{Cos}\left[2\left(e+f x\right)\right]^4\left(\frac{1}{16}\,\mathrm{Cos}\left[4\left(e+f x\right)\right]\,\mathrm{Tan}[e+f x]^n-\frac{1}{16}\,\mathrm{i}\,\mathrm{Sin}\left[4\left(e+f x\right)\right]\,\mathrm{Tan}[e+f x]^n\right)+$$

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

$$\left.\mathrm{Tan}[e+f x]^n+\mathrm{Cos}\left[4\left(e+f x\right)\right]\left(-\frac{1}{4}\,\mathrm{Tan}[e+f x]^n+\frac{1}{4}\,\mathrm{i}\,\mathrm{Sin}\left[2\left(e+f x\right)\right]\,\mathrm{Tan}[e+f x]^n\right)\right)+$$

$$\mathrm{Cos}\left[2\left(e+f x\right)\right]^2\left(-\frac{3}{8}\,\mathrm{i}\,\mathrm{Sin}\left[4\left(e+f x\right)\right]\,\mathrm{Tan}[e+f x]^n-\frac{3}{4}\,\mathrm{Sin}\left[2\left(e+f x\right)\right]\,\mathrm{Sin}\left[4\left(e+f x\right)\right]\right.$$

$$\mathrm{Tan}[e+f x]^n+\frac{3}{8}\,\mathrm{i}\,\mathrm{Sin}\left[2\left(e+f x\right)\right]^2\,\mathrm{Sin}\left[4\left(e+f x\right)\right]\,\mathrm{Tan}[e+f x]^n+\mathrm{Cos}\left[4\left(e+f x\right)\right]$$

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

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

$$\mathrm{Tan}[e+f x]^n-\frac{3}{4}\,\mathrm{i}\,\mathrm{Sin}\left[2\left(e+f x\right)\right]^2\,\mathrm{Sin}\left[4\left(e+f x\right)\right]\,\mathrm{Tan}[e+f x]^n-$$

$$\frac{1}{4}\,\mathrm{Sin}\left[2\left(e+f x\right)\right]^3\,\mathrm{Sin}\left[4\left(e+f x\right)\right]\,\mathrm{Tan}[e+f x]^n+$$

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

$$\left.\left.\left.\left.\frac{3}{4}\,\mathrm{Sin}\left[2\left(e+f x\right)\right]^2\,\mathrm{Tan}[e+f x]^n-\frac{1}{4}\,\mathrm{i}\,\mathrm{Sin}\left[2\left(e+f x\right)\right]^3\,\mathrm{Tan}[e+f x]^n\right)\right)\right)\right)\Big/$$

$$\left(f\left(1+n\right)\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^5\left(-\frac{1}{\left(1+n\right)\left(1+\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^6}\right.\right.$$

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

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

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

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

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

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

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

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

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

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

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

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

$$-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+2\,\Big(-5\,\text{AppellF1}\Big[\frac{3+n}{2},\,n,\,6,\,\frac{5+n}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

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

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

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

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

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

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

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

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

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

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

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

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

$$\text{AppellF1}\Big[\frac{3+n}{2},\,1+n,\,4,\,\frac{5+n}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

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

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

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

$$2\,\Big(-5\,\text{AppellF1}\Big[\frac{3+n}{2},\,n,\,6,\,\frac{5+n}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+n$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$2\Big(-5\,\text{AppellF1}\left[\frac{3+n}{2},n,6,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]+n$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\Big(-4\ \Big(-\frac{1}{5+n}5\ (3+n)\ \text{AppellF1}\Big[1+\frac{3+n}{2},\,n,\,6,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

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

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

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

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

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

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

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

$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$2\left(-4\,\text{AppellF1}\left[\frac{3+n}{2},n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2-$$
$$\left(\text{AppellF1}\left[\frac{1+n}{2},n,5,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$
$$\left(2\left(-5\,\text{AppellF1}\left[\frac{3+n}{2},n,6,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.\right.$$
$$\left.n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)$$
$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+(3+n)\left(-\frac{1}{3+n}5\,(1+n)\right.$$
$$\text{AppellF1}\left[1+\frac{1+n}{2},n,6,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{3+n}n\,(1+n)\,\text{AppellF1}\Big[$$
$$1+\frac{1+n}{2},1+n,5,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]$$
$$\left.\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2$$
$$\left(-5\left(-\frac{1}{5+n}6\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},n,7,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{5+n}$$
$$n\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},1+n,6,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$
$$n\left(-\frac{1}{5+n}5\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},1+n,6,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{5+n}$$
$$(1+n)\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},2+n,5,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$
$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,5,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$2\left(-5\,\text{AppellF1}\left[\frac{3+n}{2},n,6,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

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

Problem 176: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Sin}[e+fx]^2\,(b\,\text{Tan}[e+fx])^n\,dx$$

Optimal (type 5, 50 leaves, 2 steps):

$$\frac{\text{Hypergeometric2F1}\left[2,\frac{3+n}{2},\frac{5+n}{2},-\text{Tan}[e+fx]^2\right](b\,\text{Tan}[e+fx])^{3+n}}{b^3 f(3+n)}$$

Result (type 6, 4602 leaves):

$$\Bigg(8(3+n)\,\text{Cos}\left[\frac{1}{2}(e+fx)\right]^5\text{Sin}\left[\frac{1}{2}(e+fx)\right]$$
$$\Bigg(\Bigg(\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Big/$$
$$\Bigg((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$
$$2\Bigg(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+n\,\text{AppellF1}\Big[$$
$$\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Bigg)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)-$$
$$\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big/$$
$$\Bigg((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$
$$2\Bigg(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+n\,\text{AppellF1}\Big[$$
$$\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Bigg)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)$$
$$(b\,\text{Tan}[e+fx])^n\Bigg(-\frac{1}{4}\text{Cos}[2(e+fx)]^3\,\text{Tan}[e+fx]^n+\frac{1}{4}\,i\,\text{Sin}[2(e+fx)]\,\text{Tan}[e+fx]^n+$$
$$\frac{1}{2}\text{Sin}[2(e+fx)]^2\,\text{Tan}[e+fx]^n-\frac{1}{4}\,i\,\text{Sin}[2(e+fx)]^3\,\text{Tan}[e+fx]^n+$$
$$\text{Cos}[2(e+fx)]^2\left(\frac{1}{2}\text{Tan}[e+fx]^n-\frac{1}{4}\,i\,\text{Sin}[2(e+fx)]\,\text{Tan}[e+fx]^n\right)+$$
$$\text{Cos}[2(e+fx)]\left(-\frac{1}{4}\text{Tan}[e+fx]^n-\frac{1}{4}\text{Sin}[2(e+fx)]^2\,\text{Tan}[e+fx]^n\right)\Bigg)\Bigg)\Bigg/$$
$$\Bigg(f(1+n)\Bigg(\frac{1}{1+n}8n(3+n)\,\text{Cos}\left[\frac{1}{2}(e+fx)\right]^5\text{Sec}[e+fx]^2\,\text{Sin}\left[\frac{1}{2}(e+fx)\right]$$
$$\Bigg(\Bigg(\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

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

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

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

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

$$\frac{1}{1+n}20\,(3+n)\,\text{Cos}\left[\frac{1}{2}(e+fx)\right]^4\text{Sin}\left[\frac{1}{2}(e+fx)\right]^2\Bigg(\Bigg(\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Big/$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Problem 180: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Sin}[e+f x]^3 \left(b \text{Tan}[e+f x]\right)^n \, dx$$

Optimal (type 5, 78 leaves, 2 steps):

$$\frac{1}{b f (4+n)} \left(\text{Cos}[e+f x]^2\right)^{\frac{1+n}{2}} \text{Hypergeometric2F1}\left[\frac{1+n}{2}, \frac{4+n}{2}, \frac{6+n}{2}, \text{Sin}[e+f x]^2\right] \text{Sin}[e+f x]^3 \left(b \text{Tan}[e+f x]\right)^{1+n}$$

Result (type 6, 4958 leaves):

$$\Bigg(16 (4+n) \text{Cos}\left[\frac{1}{2} (e+f x)\right]^6 \text{Sin}\left[\frac{1}{2} (e+f x)\right]^2$$
$$\Bigg(\Bigg(\text{AppellF1}\left[\frac{2+n}{2}, n, 3, \frac{4+n}{2}, \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2} (e+f x)\right]^2\Bigg) \Bigg/$$
$$\Bigg((4+n) \text{AppellF1}\left[\frac{2+n}{2}, n, 3, \frac{4+n}{2}, \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right] +$$
$$2 \Bigg(-3 \text{AppellF1}\left[\frac{4+n}{2}, n, 4, \frac{6+n}{2}, \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right] + n \text{AppellF1}\Big[$$
$$\frac{4+n}{2}, 1+n, 3, \frac{6+n}{2}, \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\Big]\Bigg) \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\Bigg) -$$
$$\text{AppellF1}\left[\frac{2+n}{2}, n, 4, \frac{4+n}{2}, \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right] \Bigg/$$
$$\Bigg((4+n) \text{AppellF1}\left[\frac{2+n}{2}, n, 4, \frac{4+n}{2}, \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right] +$$
$$2 \Bigg(-4 \text{AppellF1}\left[\frac{4+n}{2}, n, 5, \frac{6+n}{2}, \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right] + n \text{AppellF1}\Big[$$
$$\frac{4+n}{2}, 1+n, 4, \frac{6+n}{2}, \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\Big]\Bigg) \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\Bigg)\Bigg)$$
$$\left(b \text{Tan}[e+f x]\right)^n \Bigg(-\frac{1}{8} \text{Sin}[3 (e+f x)] \text{Tan}[e+f x]^n + \frac{3}{8} i \text{Sin}[2 (e+f x)]$$
$$\text{Sin}[3 (e+f x)] \text{Tan}[e+f x]^n + \frac{3}{8} \text{Sin}[2 (e+f x)]^2 \text{Sin}[3 (e+f x)] \text{Tan}[e+f x]^n -$$
$$\frac{1}{8} i \text{Sin}[2 (e+f x)]^3 \text{Sin}[3 (e+f x)] \text{Tan}[e+f x]^n +$$
$$\text{Cos}[3 (e+f x)] \Bigg(-\frac{1}{8} i \text{Tan}[e+f x]^n - \frac{3}{8} \text{Sin}[2 (e+f x)] \text{Tan}[e+f x]^n +$$
$$\frac{3}{8} i \text{Sin}[2 (e+f x)]^2 \text{Tan}[e+f x]^n + \frac{1}{8} \text{Sin}[2 (e+f x)]^3 \text{Tan}[e+f x]^n\Bigg) +$$
$$\text{Cos}[2 (e+f x)]^3 \left(\frac{1}{8} i \text{Cos}[3 (e+f x)] \text{Tan}[e+f x]^n + \frac{1}{8} \text{Sin}[3 (e+f x)] \text{Tan}[e+f x]^n\right) +$$
$$\text{Cos}[2 (e+f x)]^2$$
$$\Bigg(-\frac{3}{8} \text{Sin}[3 (e+f x)] \text{Tan}[e+f x]^n + \frac{3}{8} i \text{Sin}[2 (e+f x)] \text{Sin}[3 (e+f x)] \text{Tan}[e+f x]^n +$$
$$\text{Cos}[3 (e+f x)] \left(-\frac{3}{8} i \text{Tan}[e+f x]^n - \frac{3}{8} \text{Sin}[2 (e+f x)] \text{Tan}[e+f x]^n\right)\Bigg) + \text{Cos}[2 (e+f x)]$$
$$\Bigg(\frac{3}{8} \text{Sin}[3 (e+f x)] \text{Tan}[e+f x]^n - \frac{3}{4} i \text{Sin}[2 (e+f x)] \text{Sin}[3 (e+f x)] \text{Tan}[e+f x]^n -$$

$$\frac{3}{8}\,\text{Sin}[2\,(e+f\,x)]^2\,\text{Sin}[3\,(e+f\,x)]\,\text{Tan}[e+f\,x]^n+\text{Cos}[3\,(e+f\,x)]\,\Big(\frac{3}{8}\,\mathrm{i}\,\text{Tan}[e+f\,x]^n+$$

$$\frac{3}{4}\,\text{Sin}[2\,(e+f\,x)]\,\text{Tan}[e+f\,x]^n-\frac{3}{8}\,\mathrm{i}\,\text{Sin}[2\,(e+f\,x)]^2\,\text{Tan}[e+f\,x]^n\Big)\Big)\Big)\Big)\Big)\Big/$$

$$\Big(f\,(2+n)\,\Big(\frac{1}{2+n}\,16\,n\,(4+n)\,\text{Cos}\Big[\frac{1}{2}\,(e+f\,x)\Big]^6\,\text{Sec}[e+f\,x]^2\,\text{Sin}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2$$

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

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

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

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

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

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

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

$$2\,\Big(-4\,\text{AppellF1}\Big[\frac{4+n}{2},\,n,\,5,\,\frac{6+n}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+n$$

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

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)\Big)\,\text{Tan}[e+f\,x]^{-1+n}+\frac{1}{2+n}\,16\,(4+n)\,\text{Cos}\Big[\frac{1}{2}\,(e+f\,x)\Big]^7$$

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

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

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

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

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

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

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

$$2\,\Big(-4\,\text{AppellF1}\Big[\frac{4+n}{2},\,n,\,5,\,\frac{6+n}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+n$$

$$\text{AppellF1}\Big[\frac{4+n}{2},\,1+n,\,4,\,\frac{6+n}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

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

$$\frac{1}{2+n} 48 (4+n) \operatorname{Cos}\left[\frac{1}{2}(e+f x)\right]^5 \operatorname{Sin}\left[\frac{1}{2}(e+f x)\right]^3 \left(\left(\operatorname{AppellF1}\left[\frac{2+n}{2}, n, 3, \frac{4+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right) \Big/ \left((4+n) \operatorname{AppellF1}\left[\frac{2+n}{2}, n, 3, \frac{4+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2\left(-3 \operatorname{AppellF1}\left[\frac{4+n}{2}, n, 4, \frac{6+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + n \operatorname{AppellF1}\left[\frac{4+n}{2}, 1+n, 3, \frac{6+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right) - \operatorname{AppellF1}\left[\frac{2+n}{2}, n, 4, \frac{4+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \Big/ \left((4+n) \operatorname{AppellF1}\left[\frac{2+n}{2}, n, 4, \frac{4+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2\left(-4 \operatorname{AppellF1}\left[\frac{4+n}{2}, n, 5, \frac{6+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + n \operatorname{AppellF1}\left[\frac{4+n}{2}, 1+n, 4, \frac{6+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right) \operatorname{Tan}[e+f x]^n +$$

$$\frac{1}{2+n} 16 (4+n) \operatorname{Cos}\left[\frac{1}{2}(e+f x)\right]^6 \operatorname{Sin}\left[\frac{1}{2}(e+f x)\right]^2 \left(\left(\operatorname{AppellF1}\left[\frac{2+n}{2}, n, 3, \frac{4+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right) \Big/ \left((4+n) \operatorname{AppellF1}\left[\frac{2+n}{2}, n, 3, \frac{4+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2\left(-3 \operatorname{AppellF1}\left[\frac{4+n}{2}, n, 4, \frac{6+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + n \operatorname{AppellF1}\left[\frac{4+n}{2}, 1+n, 3, \frac{6+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right) + \left(\operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \left(-\frac{1}{4+n} 3 (2+n) \operatorname{AppellF1}\left[1+\frac{2+n}{2}, n, 4, 1+\frac{4+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right] + \frac{1}{4+n} n (2+n) \operatorname{AppellF1}\left[1+\frac{2+n}{2}, 1+n, 3, 1+\frac{4+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right) \Big/ \left((4+n) \operatorname{AppellF1}\left[\frac{2+n}{2}, n, 3, \frac{4+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2\left(-3 \operatorname{AppellF1}\left[\frac{4+n}{2}, n, 4, \frac{6+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + n \operatorname{AppellF1}\left[\frac{4+n}{2}, 1+n, 3, \frac{6+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)$$

$$\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\Bigg)-\Bigg(-\frac{1}{4+n}4\left(2+n\right)\mathrm{AppellF1}\left[1+\frac{2+n}{2},n,5,1+\frac{4+n}{2},\right.$$
$$\left.\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+$$
$$\frac{1}{4+n}n\left(2+n\right)\mathrm{AppellF1}\left[1+\frac{2+n}{2},1+n,4,1+\frac{4+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\Bigg)\Bigg/$$
$$\Bigg(\left(4+n\right)\mathrm{AppellF1}\left[\frac{2+n}{2},n,4,\frac{4+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+$$
$$2\Bigg(-4\,\mathrm{AppellF1}\left[\frac{4+n}{2},n,5,\frac{6+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+n$$
$$\mathrm{AppellF1}\left[\frac{4+n}{2},1+n,4,\frac{6+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\Bigg)\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\Bigg)-$$
$$\Bigg(\mathrm{AppellF1}\left[\frac{2+n}{2},n,3,\frac{4+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2$$
$$\Bigg(2\Bigg(-3\,\mathrm{AppellF1}\left[\frac{4+n}{2},n,4,\frac{6+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+$$
$$n\,\mathrm{AppellF1}\left[\frac{4+n}{2},1+n,3,\frac{6+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\Bigg)$$
$$\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+\left(4+n\right)\Bigg(-\frac{1}{4+n}3\left(2+n\right)$$
$$\mathrm{AppellF1}\left[1+\frac{2+n}{2},n,4,1+\frac{4+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]$$
$$\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+\frac{1}{4+n}n\left(2+n\right)\mathrm{AppellF1}\left[\right.$$
$$\left.1+\frac{2+n}{2},1+n,3,1+\frac{4+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]$$
$$\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\Bigg)+2\,\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2$$
$$\Bigg(-3\Bigg(-\frac{1}{6+n}4\left(4+n\right)\mathrm{AppellF1}\left[1+\frac{4+n}{2},n,5,1+\frac{6+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+\frac{1}{6+n}$$
$$n\left(4+n\right)\mathrm{AppellF1}\left[1+\frac{4+n}{2},1+n,4,1+\frac{6+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]\Bigg)+$$
$$n\Bigg(-\frac{1}{6+n}3\left(4+n\right)\mathrm{AppellF1}\left[1+\frac{4+n}{2},1+n,4,1+\frac{6+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]+\frac{1}{6+n}$$
$$\left(1+n\right)\left(4+n\right)\mathrm{AppellF1}\left[1+\frac{4+n}{2},2+n,3,1+\frac{6+n}{2},\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\right.$$

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

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

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

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

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

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

$$\Big(2\Big(-4\,\text{AppellF1}\left[\frac{4+n}{2},n,5,\frac{6+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

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

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+(4+n)\Big(-\frac{1}{4+n}4(2+n)$$

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

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

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

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

$$\Big(-4\Big(-\frac{1}{6+n}5(4+n)\,\text{AppellF1}\Big[1+\frac{4+n}{2},n,6,1+\frac{6+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

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

$$n(4+n)\,\text{AppellF1}\Big[1+\frac{4+n}{2},1+n,5,1+\frac{6+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

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

$$n\Big(-\frac{1}{6+n}4(4+n)\,\text{AppellF1}\Big[1+\frac{4+n}{2},1+n,5,1+\frac{6+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

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

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

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

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

$$2\Big(-4\,\text{AppellF1}\left[\frac{4+n}{2},n,5,\frac{6+n}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

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

Problem 181: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Sin}[e+f x]\,(b\,\text{Tan}[e+f x])^n\,dx$$

Optimal (type 5, 76 leaves, 2 steps):

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

Result (type 6, 1888 leaves):

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

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

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

$$2\left(-2\operatorname{AppellF1}\left[\frac{4+n}{2},n,3,\frac{6+n}{2},\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$

$$n\operatorname{AppellF1}\left[\frac{4+n}{2},1+n,2,\frac{6+n}{2},\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

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

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

$$\operatorname{Sin}[e+fx]^2\left(2\left(-2\operatorname{AppellF1}\left[\frac{4+n}{2},n,3,\frac{6+n}{2},\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.\right.$$

$$\left.n\operatorname{AppellF1}\left[\frac{4+n}{2},1+n,2,\frac{6+n}{2},\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)$$

$$\operatorname{Sec}\left[\frac{1}{2}(e+fx)\right]^2\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]+(4+n)\left(-\frac{1}{4+n}2(2+n)\operatorname{AppellF1}\left[1+\frac{2+n}{2},\right.\right.$$

$$n,3,1+\frac{4+n}{2},\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\operatorname{Sec}\left[\frac{1}{2}(e+fx)\right]^2\operatorname{Tan}\left[$$

$$\frac{1}{2}(e+fx)\right]+\frac{1}{4+n}n(2+n)\operatorname{AppellF1}\left[1+\frac{2+n}{2},1+n,2,1+\frac{4+n}{2},\right.$$

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

$$2\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(-2\left(-\frac{1}{6+n}3(4+n)\operatorname{AppellF1}\left[1+\frac{4+n}{2},n,4,1+\frac{6+n}{2},\right.\right.\right.$$

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

$$\frac{1}{6+n}n(4+n)\operatorname{AppellF1}\left[1+\frac{4+n}{2},1+n,3,1+\frac{6+n}{2},\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

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

$$n\left(-\frac{1}{6+n}2(4+n)\operatorname{AppellF1}\left[1+\frac{4+n}{2},1+n,3,1+\frac{6+n}{2},\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.$$

$$-\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\operatorname{Sec}\left[\frac{1}{2}(e+fx)\right]^2\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{6+n}$$

$$(1+n)(4+n)\operatorname{AppellF1}\left[1+\frac{4+n}{2},2+n,2,1+\frac{6+n}{2},\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

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

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

$$2\left(-2\operatorname{AppellF1}\left[\frac{4+n}{2},n,3,\frac{6+n}{2},\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+n\right.$$

$$\operatorname{AppellF1}\left[\frac{4+n}{2},1+n,2,\frac{6+n}{2},\operatorname{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

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

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

$$\mathrm{Tan}[e+f x]^{1+n}\Big)\Big/$$

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

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

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

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

Problem 183: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Csc}[e+f x]^3\ (b\,\mathrm{Tan}[e+f x])^n\,dx$$

Optimal (type 5, 78 leaves, 2 steps):

$$-\frac{1}{f\ (1-n)}\mathrm{Cos}[e+f x]$$

$$\mathrm{Hypergeometric2F1}\left[\frac{1-n}{2},\frac{4-n}{2},\frac{3-n}{2},\mathrm{Cos}[e+f x]^2\right]\ \left(\mathrm{Sin}[e+f x]^2\right)^{-n/2}\ (b\,\mathrm{Tan}[e+f x])^n$$

Result (type 5, 182 leaves):

$$\frac{1}{4\,f\,n\ (-4+n^2)}\ \Big(n\ (2+n)\ \mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]^4\,\mathrm{Hypergeometric2F1}\left[-1+\frac{n}{2},n,\frac{n}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$(-2+n)\ \Big(n\,\mathrm{Hypergeometric2F1}\left[1+\frac{n}{2},n,2+\frac{n}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$2\ (2+n)\ \mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]^2\,\mathrm{Hypergeometric2F1}\left[\frac{n}{2},n,1+\frac{n}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Big)\Big)$$

$$\left(\mathrm{Cos}[e+f x]\ \mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\right)^n\ \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\ (b\,\mathrm{Tan}[e+f x])^n$$

Problem 184: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Csc}[e+f x]^5\ (b\,\mathrm{Tan}[e+f x])^n\,dx$$

Optimal (type 5, 78 leaves, 2 steps):

$$-\frac{1}{f\ (1-n)}\mathrm{Cos}[e+f x]$$

$$\mathrm{Hypergeometric2F1}\left[\frac{1-n}{2},\frac{6-n}{2},\frac{3-n}{2},\mathrm{Cos}[e+f x]^2\right]\ \left(\mathrm{Sin}[e+f x]^2\right)^{-n/2}\ (b\,\mathrm{Tan}[e+f x])^n$$

Result (type 5, 254 leaves):

$$\frac{1}{16\,f}\left(\text{Cos}[e+f\,x]\,\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^n$$
$$\left(\frac{1}{-4+n}\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]^4\,\text{Hypergeometric2F1}\left[-2+\frac{n}{2},\,n,\,-1+\frac{n}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+\right.$$
$$\frac{1}{-2+n}4\,\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Hypergeometric2F1}\left[-1+\frac{n}{2},\,n,\,\frac{n}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$
$$\frac{6\,\text{Hypergeometric2F1}\left[\frac{n}{2},\,n,\,1+\frac{n}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]}{n}+\frac{1}{2+n}$$
$$4\,\text{Hypergeometric2F1}\left[1+\frac{n}{2},\,n,\,2+\frac{n}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2+\frac{1}{4+n}$$
$$\left.\text{Hypergeometric2F1}\left[2+\frac{n}{2},\,n,\,3+\frac{n}{2},\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^4\right)\,(b\,\text{Tan}[e+f\,x])^n$$

Problem 222: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Cot}[e+f\,x]^m\,\text{Tan}[e+f\,x]^n\,dx$$

Optimal (type 5, 62 leaves, 3 steps):

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

Result (type 6, 2965 leaves):

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

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

$$\text{Sec}[e+f x]^2\,\text{Tan}[e+f x]^{-1+n}\Big)\Big/\Big((-1+m-n)\,\Big(2\,\text{AppellF1}\Big[\frac{1}{2}(3-m+n),$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\Big(2\,(-3+m-n)\,\text{Cos}\left[\frac{1}{2}(e+f x)\right]^2\text{Cot}\left[\frac{1}{2}(e+f x)\right]\,\text{Cot}[e+f x]^m$$

$$\Big(-\frac{1}{3-m+n}(1-m+n)\,\text{AppellF1}\Big[1+\frac{1}{2}(1-m+n),\,-m+n,\,2,\,1+\frac{1}{2}(3-m+n),$$

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

$$\frac{1}{3-m+n}(-m+n)\,(1-m+n)\,\text{AppellF1}\Big[1+\frac{1}{2}(1-m+n),\,1-m+n,\,1,$$

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

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

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

$$\Big(2\left(-3+m-n\right)\mathrm{AppellF1}\left[\frac{1}{2}\left(1-m+n\right),-m+n,1,\frac{1}{2}\left(3-m+n\right),\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2},\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\right]\mathrm{Cos}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\mathrm{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\mathrm{Cot}[e+f x]^{m}$$
$$\Big(-\left(-3+m-n\right)\mathrm{AppellF1}\left[\frac{1}{2}\left(1-m+n\right),-m+n,1,\frac{1}{2}\left(3-m+n\right),\right.$$
$$\left.\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2},-\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\right]\mathrm{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]\mathrm{Csc}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}+$$
$$\left(-3+m-n\right)\mathrm{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\Big(-\frac{1}{3-m+n}\left(1-m+n\right)\mathrm{AppellF1}\left[1+\frac{1}{2}\left(1-m+n\right),\right.$$
$$\left.-m+n,2,1+\frac{1}{2}\left(3-m+n\right),\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2},-\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\right]$$
$$\mathrm{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+\frac{1}{3-m+n}\left(-m+n\right)\left(1-m+n\right)$$
$$\mathrm{AppellF1}\left[1+\frac{1}{2}\left(1-m+n\right),1-m+n,1,1+\frac{1}{2}\left(3-m+n\right),\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2},\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\right]\mathrm{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\Big)+$$
$$2\Big(-\frac{1}{5-m+n}2\left(3-m+n\right)\mathrm{AppellF1}\left[1+\frac{1}{2}\left(3-m+n\right),-m+n,3,1+\frac{1}{2}\left(5-m+n\right),\right.$$
$$\left.\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2},-\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\right]\mathrm{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+$$
$$\frac{1}{5-m+n}\left(-m+n\right)\left(3-m+n\right)\mathrm{AppellF1}\left[1+\frac{1}{2}\left(3-m+n\right),1-m+n,2,\right.$$
$$\left.1+\frac{1}{2}\left(5-m+n\right),\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2},-\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\right]\mathrm{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}$$
$$\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\Big)+2\left(m-n\right)\Big(-\frac{1}{5-m+n}\left(3-m+n\right)\mathrm{AppellF1}\left[1+\frac{1}{2}\left(3-m+n\right),\right.$$
$$\left.1-m+n,2,1+\frac{1}{2}\left(5-m+n\right),\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2},-\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\right]$$
$$\mathrm{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]+\frac{1}{5-m+n}\left(1-m+n\right)\left(3-m+n\right)$$
$$\mathrm{AppellF1}\left[1+\frac{1}{2}\left(3-m+n\right),2-m+n,1,1+\frac{1}{2}\left(5-m+n\right),\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2},\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\right]\mathrm{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^{2}\mathrm{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\Big)\Big)\,\mathrm{Tan}[e+f x]^{n}\Big)\Big/$$

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

Problem 223: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Cot}\left[e+f\,x\right]^m\left(b\,\text{Tan}\left[e+f\,x\right]\right)^n\,dx$$

Optimal (type 5, 67 leaves, 3 steps):

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

Result (type 6, 2967 leaves):

$$-\left(\left(\left(2\,e^{n\,\text{Log}\left[\text{Cot}\left[e+f\,x\right]\right]+n\,\text{Log}\left[\text{Tan}\left[e+f\,x\right]\right]}\left(-3+m-n\right)\right.\right.\right.$$
$$\text{AppellF1}\left[\frac{1}{2}\left(1-m+n\right),-m+n,1,\frac{1}{2}\left(3-m+n\right),\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]$$
$$\left.\text{Cos}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\,\text{Cot}\left[\frac{1}{2}\left(e+f\,x\right)\right]\,\text{Cot}\left[e+f\,x\right]^{2\,m-n}\left(b\,\text{Tan}\left[e+f\,x\right]\right)^n\right)\Big/\left(f\left(-1+m-n\right)\right.$$

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

$$\Bigg(2\,(-3+m-n)\,\text{Cos}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\,\text{Cot}[e+f\,x]^m$$

$$\Bigg(-\frac{1}{3-m+n}\,(1-m+n)\,\text{AppellF1}\left[1+\frac{1}{2}\,(1-m+n),\,-m+n,\,2,\,1+\frac{1}{2}\,(3-m+n),\right.$$

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

$$\frac{1}{3-m+n}\,(-m+n)\,(1-m+n)\,\text{AppellF1}\left[1+\frac{1}{2}\,(1-m+n),\,1-m+n,\,1,\right.$$

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

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

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

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

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

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

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

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

$$\Bigg(-(-3+m-n)\,\text{AppellF1}\left[\frac{1}{2}\,(1-m+n),\,-m+n,\,1,\,\frac{1}{2}\,(3-m+n),\right.$$

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

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

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

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

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

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

$$2\,\Bigg(-\frac{1}{5-m+n}2\,(3-m+n)\,\text{AppellF1}\left[1+\frac{1}{2}\,(3-m+n),\,-m+n,\,3,\,1+\frac{1}{2}\,(5-m+n),\right.$$

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

$$\frac{1}{5-m+n}\,(-m+n)\,(3-m+n)\,\text{AppellF1}\left[1+\frac{1}{2}\,(3-m+n),\,1-m+n,\,2,\right.$$

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

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

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

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

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

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

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

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

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

$$\left(-3+m-n\right)\text{AppellF1}\left[\frac{1}{2}\left(1-m+n\right),\,-m+n,\,1,\,\frac{1}{2}\left(3-m+n\right),\right.$$

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

$$\Big(2\,m\left(-3+m-n\right)\text{AppellF1}\left[\frac{1}{2}\left(1-m+n\right),\,-m+n,\,1,\,\frac{1}{2}\left(3-m+n\right),\right.$$

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

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

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

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

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

$$\left(-3+m-n\right)\text{AppellF1}\left[\frac{1}{2}\left(1-m+n\right),\,-m+n,\,1,\,\frac{1}{2}\left(3-m+n\right),\right.$$

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

Problem 224: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int\left(a\,\text{Cot}\left[e+f x\right]\right)^{m}\text{Tan}\left[e+f x\right]^{n}\,dx$$

Optimal (type 5, 64 leaves, 3 steps):

$$\frac{1}{f\,(1-m+n)}$$
$$(a\,\mathrm{Cot}[e+f\,x])^m\,\mathrm{Hypergeometric2F1}\left[1,\,\frac{1}{2}\,(1-m+n),\,\frac{1}{2}\,(3-m+n),\,-\mathrm{Tan}[e+f\,x]^2\right]\,\mathrm{Tan}[e+f\,x]^{1+n}$$

Result (type 6, 2973 leaves):

$$-\Bigg(\Bigg(2\,e^{n\,\mathrm{Log}[\mathrm{Cot}[e+f\,x]]+n\,\mathrm{Log}[\mathrm{Tan}[e+f\,x]]}\,(-3+m-n)$$
$$\mathrm{AppellF1}\left[\frac{1}{2}\,(1-m+n),\,-m+n,\,1,\,\frac{1}{2}\,(3-m+n),\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$
$$\mathrm{Cos}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\,\mathrm{Cot}[e+f\,x]^{m-n}\,(a\,\mathrm{Cot}[e+f\,x])^m\,\mathrm{Tan}[e+f\,x]^n\Bigg)\Bigg/$$
$$\Bigg(f\,(-1+m-n)\,\Bigg(2\,\mathrm{AppellF1}\left[\frac{1}{2}\,(3-m+n),\,-m+n,\,2,\,\frac{1}{2}\,(5-m+n),\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+2\,(m-n)\,\mathrm{AppellF1}\left[\frac{1}{2}\,(3-m+n),\,1-m+n,\,1,\,\frac{1}{2}\,(5-m+n),\right.$$
$$\left.\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+(-3+m-n)\,\mathrm{AppellF1}\left[\frac{1}{2}\,(1-m+n),\right.$$
$$\left.-m+n,\,1,\,\frac{1}{2}\,(3-m+n),\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\mathrm{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)$$
$$\Bigg(-\Bigg(\Bigg(2\,(-3+m-n)\,n\,\mathrm{AppellF1}\left[\frac{1}{2}\,(1-m+n),\,-m+n,\,1,\,\frac{1}{2}\,(3-m+n),\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\mathrm{Cos}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\,\mathrm{Cot}[e+f\,x]^m$$
$$\mathrm{Sec}[e+f\,x]^2\,\mathrm{Tan}[e+f\,x]^{-1+n}\Bigg)\Bigg/\Bigg((-1+m-n)\,\Bigg(2\,\mathrm{AppellF1}\left[\frac{1}{2}\,(3-m+n),\right.$$
$$\left.-m+n,\,2,\,\frac{1}{2}\,(5-m+n),\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$
$$2\,(m-n)\,\mathrm{AppellF1}\left[\frac{1}{2}\,(3-m+n),\,1-m+n,\,1,\,\frac{1}{2}\,(5-m+n),\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+(-3+m-n)\,\mathrm{AppellF1}\left[\frac{1}{2}\,(1-m+n),\,-m+n,\,1,\right.$$
$$\left.\frac{1}{2}\,(3-m+n),\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\mathrm{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\Bigg)\Bigg)+$$
$$\Bigg(2\,(-3+m-n)\,\mathrm{AppellF1}\left[\frac{1}{2}\,(1-m+n),\,-m+n,\,1,\,\frac{1}{2}\,(3-m+n),\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\mathrm{Cos}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Cot}[e+f\,x]^m\,\mathrm{Tan}[e+f\,x]^n\Bigg)\Bigg/$$
$$\Bigg((-1+m-n)\,\Bigg(2\,\mathrm{AppellF1}\left[\frac{1}{2}\,(3-m+n),\,-m+n,\,2,\,\frac{1}{2}\,(5-m+n),\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\right.$$
$$\left.-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+2\,(m-n)\,\mathrm{AppellF1}\left[\frac{1}{2}\,(3-m+n),\,1-m+n,\,1,\,\frac{1}{2}\,(5-m+n),\right.$$
$$\left.\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+(-3+m-n)\,\mathrm{AppellF1}\left[\frac{1}{2}\,(1-m+n),\,-m+\right.$$
$$\left.n,\,1,\,\frac{1}{2}\,(3-m+n),\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\mathrm{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Bigg)\Bigg)+$$

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

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

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

$$2\left(-\frac{1}{5-m+n}2\left(3-m+n\right)\text{AppellF1}\left[1+\frac{1}{2}\left(3-m+n\right),-m+n,3,1+\frac{1}{2}\left(5-m+n\right),\right.\right.$$

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

$$\frac{1}{5-m+n}\left(-m+n\right)\left(3-m+n\right)\text{AppellF1}\left[1+\frac{1}{2}\left(3-m+n\right),1-m+n,2,\right.$$

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

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

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

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

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

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

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

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

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

$$\left(-3+m-n\right)\text{AppellF1}\left[\frac{1}{2}\left(1-m+n\right),-m+n,1,\frac{1}{2}\left(3-m+n\right),\right.$$

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

$$\left(2\,m\left(-3+m-n\right)\text{AppellF1}\left[\frac{1}{2}\left(1-m+n\right),-m+n,1,\frac{1}{2}\left(3-m+n\right),\right.\right.$$

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

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

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

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

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

$$\left(-3+m-n\right)\text{AppellF1}\left[\frac{1}{2}\left(1-m+n\right),-m+n,1,\frac{1}{2}\left(3-m+n\right),\right.$$

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

Problem 225: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int (a\,\text{Cot}[e+f\,x])^m\,(b\,\text{Tan}[e+f\,x])^n\,dx$$

Optimal (type 5, 69 leaves, 3 steps):

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

Result (type 6, 2975 leaves):

$$-\Bigg(\Bigg(\Big(2\,e^{n\,\text{Log}[\text{Cot}[e+f\,x]]+n\,\text{Log}[\text{Tan}[e+f\,x]]}\,(-3+m-n)\,\text{AppellF1}\left[\frac{1}{2}\,(1-m+n),\,-m+n,\,1,\,\frac{1}{2}\,(3-m+n),\,\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\text{Cos}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]\,\text{Cot}[e+f\,x]^{m-n}\,(a\,\text{Cot}[e+f\,x])^m\,(b\,\text{Tan}[e+f\,x])^n\Big)\Big/$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\Big(2\,(-3+m-n)\,\text{Cos}\left[\frac{1}{2}(e+fx)\right]^2\text{Cot}\left[\frac{1}{2}(e+fx)\right]\,\text{Cot}[e+fx]^m$$

$$\Big(-\frac{1}{3-m+n}(1-m+n)\,\text{AppellF1}\Big[1+\frac{1}{2}(1-m+n),-m+n,2,1+\frac{1}{2}(3-m+n),$$

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

$$\frac{1}{3-m+n}(-m+n)\,(1-m+n)\,\text{AppellF1}\Big[1+\frac{1}{2}(1-m+n),1-m+n,1,$$

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

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

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

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

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

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

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

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

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

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

Problem 231: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Sec}[e+fx]^3\sqrt{d\,\text{Tan}[e+fx]}\,dx$$

Optimal (type 4, 107 leaves, 5 steps):

$$-\frac{4\,\text{Cos}[e+fx]\,\text{EllipticE}\left[e-\frac{\pi}{4}+fx,\,2\right]\sqrt{d\,\text{Tan}[e+fx]}}{5\,f\,\sqrt{\text{Sin}[2e+2fx]}}+\frac{4\,\text{Cos}[e+fx]\,\left(d\,\text{Tan}[e+fx]\right)^{3/2}}{5\,d\,f}+\frac{2\,\text{Sec}[e+fx]\,\left(d\,\text{Tan}[e+fx]\right)^{3/2}}{5\,d\,f}$$

Result (type 4, 139 leaves):

$$\Bigg(2\,\text{Cos}[e+fx]\sqrt{d\,\text{Tan}[e+fx]}\,\Bigg(-2\,(-1)^{3/4}\,\text{EllipticE}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[e+fx]}\right],\,-1\right]\sqrt{\text{Sec}[e+fx]^2}+2\,(-1)^{3/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[e+fx]}\right],\,-1\right]\sqrt{\text{Sec}[e+fx]^2}+\text{Sec}[e+fx]^2\,\text{Tan}[e+fx]^{3/2}\Bigg)\Bigg)\Bigg/\left(5\,f\,\sqrt{\text{Tan}[e+fx]}\right)$$

Problem 232: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Sec}[e+fx]\,\sqrt{d\,\text{Tan}[e+fx]}\,dx$$

Optimal (type 4, 75 leaves, 4 steps):

$$-\frac{2\,\text{Cos}[e+fx]\,\text{EllipticE}\left[e-\frac{\pi}{4}+fx,\,2\right]\sqrt{d\,\text{Tan}[e+fx]}}{f\,\sqrt{\text{Sin}[2e+2fx]}}+\frac{2\,\text{Cos}[e+fx]\,\left(d\,\text{Tan}[e+fx]\right)^{3/2}}{d\,f}$$

Result (type 4, 99 leaves):

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

Problem 233: Result unnecessarily involves complex numbers and more than twice size of optimal antiderivative.

$$\int \text{Cos}[e+f x]\,\sqrt{d\,\text{Tan}[e+f x]}\,dx$$

Optimal (type 4, 47 leaves, 3 steps):

$$\frac{\text{Cos}[e+f x]\,\text{EllipticE}\left[e-\frac{\pi}{4}+f x,2\right]\sqrt{d\,\text{Tan}[e+f x]}}{f\sqrt{\text{Sin}[2e+2f x]}}$$

Result (type 4, 126 leaves):

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

Problem 234: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Cos}[e+f x]^3\,\sqrt{d\,\text{Tan}[e+f x]}\,dx$$

Optimal (type 4, 81 leaves, 4 steps):

$$\frac{\text{Cos}[e+f x]\,\text{EllipticE}\left[e-\frac{\pi}{4}+f x,2\right]\sqrt{d\,\text{Tan}[e+f x]}}{2f\sqrt{\text{Sin}[2e+2f x]}}+\frac{\text{Cos}[e+f x]^3\,(d\,\text{Tan}[e+f x])^{3/2}}{3\,d\,f}$$

Result (type 4, 154 leaves):

$$\left(\text{Cos}[e+f x]\left(6(-1)^{3/4}\,\text{EllipticE}\left[\text{i}\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[e+f x]}\right],-1\right]\sqrt{\text{Sec}[e+f x]^2}-6(-1)^{3/4}\,\text{EllipticF}\left[\text{i}\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[e+f x]}\right],-1\right]\sqrt{\text{Sec}[e+f x]^2}+\text{Sec}[e+f x]\,(7\,\text{Sin}[e+f x]+\text{Sin}[3(e+f x)])\sqrt{\text{Tan}[e+f x]}\right)\sqrt{d\,\text{Tan}[e+f x]}\right)\Big/\left(12\,f\sqrt{\text{Tan}[e+f x]}\right)$$

Problem 235: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Cos}[e+f x]^5\,\sqrt{d\,\text{Tan}[e+f x]}\,dx$$

Optimal (type 4, 111 leaves, 5 steps):

$$\frac{7\,\text{Cos}[e+f\,x]\,\text{EllipticE}\left[e-\frac{\pi}{4}+f\,x,\,2\right]\sqrt{d\,\text{Tan}[e+f\,x]}}{20\,f\,\sqrt{\text{Sin}[2\,e+2\,f\,x]}}+\frac{7\,\text{Cos}[e+f\,x]^3\,(d\,\text{Tan}[e+f\,x])^{3/2}}{30\,d\,f}+\frac{\text{Cos}[e+f\,x]^5\,(d\,\text{Tan}[e+f\,x])^{3/2}}{5\,d\,f}$$

Result (type 4, 166 leaves):

$$\left(\text{Cos}[e+f\,x]\left(84\,(-1)^{3/4}\,\text{EllipticE}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[e+f\,x]}\right],-1\right]\sqrt{\text{Sec}[e+f\,x]^2}-84\,(-1)^{3/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[e+f\,x]}\right],-1\right]\sqrt{\text{Sec}[e+f\,x]^2}+\text{Sec}[e+f\,x]\,(104\,\text{Sin}[e+f\,x]+23\,\text{Sin}[3\,(e+f\,x)]+3\,\text{Sin}[5\,(e+f\,x)])\sqrt{\text{Tan}[e+f\,x]}\right)\sqrt{d\,\text{Tan}[e+f\,x]}\right)\Big/\left(240\,f\sqrt{\text{Tan}[e+f\,x]}\right)$$

Problem 241: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Sec}[a+b\,x]^5\,(d\,\text{Tan}[a+b\,x])^{3/2}\,dx$$

Optimal (type 4, 136 leaves, 6 steps):

$$-\frac{4\,d^2\,\text{EllipticF}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\text{Sec}[a+b\,x]\sqrt{\text{Sin}[2\,a+2\,b\,x]}}{77\,b\,\sqrt{d\,\text{Tan}[a+b\,x]}}-\frac{4\,d\,\text{Sec}[a+b\,x]\sqrt{d\,\text{Tan}[a+b\,x]}}{77\,b}-\frac{2\,d\,\text{Sec}[a+b\,x]^3\sqrt{d\,\text{Tan}[a+b\,x]}}{77\,b}+\frac{2\,d\,\text{Sec}[a+b\,x]^5\sqrt{d\,\text{Tan}[a+b\,x]}}{11\,b}$$

Result (type 4, 122 leaves):

$$\left(2\,\text{Cos}[a+b\,x]^3\left(4\,(-1)^{1/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]\left(\text{Sec}[a+b\,x]^2\right)^{3/2}-\frac{1}{4}\,(-23+6\,\text{Cos}[2\,(a+b\,x)]+\text{Cos}[4\,(a+b\,x)])\,\text{Sec}[a+b\,x]^8\sqrt{\text{Tan}[a+b\,x]}\right)(d\,\text{Tan}[a+b\,x])^{3/2}\right)\Big/\left(77\,b\,\text{Tan}[a+b\,x]^{3/2}\right)$$

Problem 242: Result unnecessarily involves imaginary or complex numbers.

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

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

$$-\frac{2\,d^2\,\text{EllipticF}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\text{Sec}[a+b\,x]\sqrt{\text{Sin}[2\,a+2\,b\,x]}}{21\,b\,\sqrt{d\,\text{Tan}[a+b\,x]}}-\frac{2\,d\,\text{Sec}[a+b\,x]\sqrt{d\,\text{Tan}[a+b\,x]}}{21\,b}+\frac{2\,d\,\text{Sec}[a+b\,x]^3\sqrt{d\,\text{Tan}[a+b\,x]}}{7\,b}$$

Result (type 4, 110 leaves):

$$-\left(\left(d\,\text{Sec}[a+b\,x]^3\left(-4\,(-1)^{1/4}\,\text{Cos}[a+b\,x]^4\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]\sqrt{\text{Sec}[a+b\,x]^2}+\left(-5+\text{Cos}[2\,(a+b\,x)]\right)\sqrt{\text{Tan}[a+b\,x]}\right)\sqrt{d\,\text{Tan}[a+b\,x]}\right)\Big/\left(21\,b\,\sqrt{\text{Tan}[a+b\,x]}\right)\right)$$

Problem 243: Result unnecessarily involves imaginary or complex numbers.

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

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

$$-\frac{d^2\,\text{EllipticF}\left[a-\frac{\pi}{4}+b\,x,2\right]\text{Sec}[a+b\,x]\sqrt{\text{Sin}[2\,a+2\,b\,x]}}{3\,b\,\sqrt{d\,\text{Tan}[a+b\,x]}}+\frac{2\,d\,\text{Sec}[a+b\,x]\,\sqrt{d\,\text{Tan}[a+b\,x]}}{3\,b}$$

Result (type 4, 87 leaves):

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

Problem 244: Result unnecessarily involves imaginary or complex numbers.

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

Optimal (type 4, 78 leaves, 4 steps):

$$\frac{d^2\,\text{EllipticF}\left[a-\frac{\pi}{4}+b\,x,2\right]\text{Sec}[a+b\,x]\sqrt{\text{Sin}[2\,a+2\,b\,x]}}{2\,b\,\sqrt{d\,\text{Tan}[a+b\,x]}}-\frac{d\,\text{Cos}[a+b\,x]\,\sqrt{d\,\text{Tan}[a+b\,x]}}{b}$$

Result (type 4, 85 leaves):

$$-\frac{1}{b\,\text{Tan}[a+b\,x]^{3/2}}\text{Cos}[a+b\,x]\left((-1)^{1/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b\,x]}\right],-1\right]\sqrt{\text{Sec}[a+b\,x]^2}+\sqrt{\text{Tan}[a+b\,x]}\right)(d\,\text{Tan}[a+b\,x])^{3/2}$$

Problem 245: Result unnecessarily involves imaginary or complex numbers.

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

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

$$\frac{d^2\,\text{EllipticF}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\,\text{Sec}[a+b\,x]\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}}{12\,b\,\sqrt{d\,\text{Tan}[a+b\,x]}}+\frac{d\,\text{Cos}[a+b\,x]\,\sqrt{d\,\text{Tan}[a+b\,x]}}{6\,b}-\frac{d\,\text{Cos}[a+b\,x]^3\,\sqrt{d\,\text{Tan}[a+b\,x]}}{3\,b}$$

Result (type 4, 96 leaves):

$$-\left(\left(\text{Cos}[a+b\,x]\,\left((-1)^{1/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],\,-1\right]\,\sqrt{\text{Sec}[a+b\,x]^2}+\text{Cos}[2\,(a+b\,x)]\,\sqrt{\text{Tan}[a+b\,x]}\right)\,(d\,\text{Tan}[a+b\,x])^{3/2}\right)\Big/\left(6\,b\,\text{Tan}[a+b\,x]^{3/2}\right)\right)$$

Problem 246: Result unnecessarily involves imaginary or complex numbers.

$$\int \text{Cos}[a+b\,x]^5\,(d\,\text{Tan}[a+b\,x])^{3/2}\,dx$$

Optimal (type 4, 136 leaves, 6 steps):

$$\frac{d^2\,\text{EllipticF}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\,\text{Sec}[a+b\,x]\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}}{24\,b\,\sqrt{d\,\text{Tan}[a+b\,x]}}+\frac{d\,\text{Cos}[a+b\,x]\,\sqrt{d\,\text{Tan}[a+b\,x]}}{12\,b}+\frac{d\,\text{Cos}[a+b\,x]^3\,\sqrt{d\,\text{Tan}[a+b\,x]}}{30\,b}-\frac{d\,\text{Cos}[a+b\,x]^5\,\sqrt{d\,\text{Tan}[a+b\,x]}}{5\,b}$$

Result (type 4, 131 leaves):

$$\left(\text{Cos}[2\,(a+b\,x)]\,\text{Csc}[a+b\,x]\,\left(10\,(-1)^{1/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],\,-1\right]\,\sqrt{\text{Sec}[a+b\,x]^2}+(-3+10\,\text{Cos}[2\,(a+b\,x)]+3\,\text{Cos}[4\,(a+b\,x)])\,\sqrt{\text{Tan}[a+b\,x]}\right)\,(d\,\text{Tan}[a+b\,x])^{3/2}\right)\Big/\left(120\,b\,\sqrt{\text{Tan}[a+b\,x]}\,\left(-1+\text{Tan}[a+b\,x]^2\right)\right)$$

Problem 253: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Sec}[e+f\,x]^5}{\sqrt{d\,\text{Tan}[e+f\,x]}}\,dx$$

Optimal (type 4, 109 leaves, 5 steps):

$$\frac{4\,\text{EllipticF}\left[e-\frac{\pi}{4}+f\,x,\,2\right]\,\text{Sec}[e+f\,x]\,\sqrt{\text{Sin}[2\,e+2\,f\,x]}}{7\,f\,\sqrt{d\,\text{Tan}[e+f\,x]}}+\frac{4\,\text{Sec}[e+f\,x]\,\sqrt{d\,\text{Tan}[e+f\,x]}}{7\,d\,f}+\frac{2\,\text{Sec}[e+f\,x]^3\,\sqrt{d\,\text{Tan}[e+f\,x]}}{7\,d\,f}$$

Result (type 4, 104 leaves):

$$\left(\text{Sec}[e+f x]^4 \left(3 \,\text{Sin}[e+f x]+\text{Sin}\left[3 \left(e+f x\right)\right] - 8 \left(-1\right)^{1/4} \text{Cos}[e+f x]^5 \,\text{EllipticF}\left[i \,\text{ArcSinh}\left[\left(-1\right)^{1/4} \sqrt{\text{Tan}[e+f x]}\right],-1\right] \sqrt{\text{Sec}[e+f x]^2} \sqrt{\text{Tan}[e+f x]}\right)\right) \Big/ \left(7 f \sqrt{d \,\text{Tan}[e+f x]}\right)$$

Problem 254: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Sec}[e+f x]^3}{\sqrt{d \,\text{Tan}[e+f x]}} \, dx$$

Optimal (type 4, 79 leaves, 4 steps):

$$\frac{2 \,\text{EllipticF}\left[e-\frac{\pi}{4}+f x,2\right] \text{Sec}[e+f x] \sqrt{\text{Sin}[2 e+2 f x]}}{3 f \sqrt{d \,\text{Tan}[e+f x]}}+\frac{2 \,\text{Sec}[e+f x] \sqrt{d \,\text{Tan}[e+f x]}}{3 d f}$$

Result (type 4, 84 leaves):

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

Problem 255: Result unnecessarily involves imaginary or complex numbers.

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

Optimal (type 4, 47 leaves, 3 steps):

$$\frac{\text{EllipticF}\left[e-\frac{\pi}{4}+f x,2\right] \text{Sec}[e+f x] \sqrt{\text{Sin}[2 e+2 f x]}}{f \sqrt{d \,\text{Tan}[e+f x]}}$$

Result (type 4, 77 leaves):

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

Problem 256: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Cos}[e+f x]}{\sqrt{d \,\text{Tan}[e+f x]}} \, dx$$

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

$$\frac{\text{EllipticF}\left[e-\frac{\pi}{4}+f\,x,\,2\right]\,\text{Sec}[e+f\,x]\,\sqrt{\text{Sin}[2\,e+2\,f\,x]}}{2\,f\,\sqrt{d\,\text{Tan}[e+f\,x]}}+\frac{\text{Cos}[e+f\,x]\,\sqrt{d\,\text{Tan}[e+f\,x]}}{d\,f}$$

Result (type 4, 126 leaves):

$$\left(\text{Cos}\left[2\,(e+f\,x)\right]\,\text{Sec}[e+f\,x]\left(\left(-1\right)^{1/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[\left(-1\right)^{1/4}\,\sqrt{\text{Tan}[e+f\,x]}\right],\,-1\right]\,\text{Sec}[e+f\,x]^2-\sqrt{\text{Sec}[e+f\,x]^2}\,\sqrt{\text{Tan}[e+f\,x]}\right)\sqrt{\text{Tan}[e+f\,x]}\right)\Big/\left(f\,\sqrt{\text{Sec}[e+f\,x]^2}\,\sqrt{d\,\text{Tan}[e+f\,x]}\,\left(-1+\text{Tan}[e+f\,x]^2\right)\right)$$

Problem 257: Result unnecessarily involves imaginary or complex numbers.

$$\int\frac{\text{Cos}[e+f\,x]^3}{\sqrt{d\,\text{Tan}[e+f\,x]}}\,dx$$

Optimal (type 4, 109 leaves, 5 steps):

$$\frac{5\,\text{EllipticF}\left[e-\frac{\pi}{4}+f\,x,\,2\right]\,\text{Sec}[e+f\,x]\,\sqrt{\text{Sin}[2\,e+2\,f\,x]}}{12\,f\,\sqrt{d\,\text{Tan}[e+f\,x]}}+\frac{5\,\text{Cos}[e+f\,x]\,\sqrt{d\,\text{Tan}[e+f\,x]}}{6\,d\,f}+\frac{\text{Cos}[e+f\,x]^3\,\sqrt{d\,\text{Tan}[e+f\,x]}}{3\,d\,f}$$

Result (type 4, 94 leaves):

$$\left(11\,\text{Sin}[e+f\,x]+\text{Sin}\left[3\,(e+f\,x)\right]-10\,\left(-1\right)^{1/4}\,\text{Cos}[e+f\,x]\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[\left(-1\right)^{1/4}\,\sqrt{\text{Tan}[e+f\,x]}\right],\,-1\right]\,\sqrt{\text{Sec}[e+f\,x]^2}\,\sqrt{\text{Tan}[e+f\,x]}\right)\Big/\left(12\,f\,\sqrt{d\,\text{Tan}[e+f\,x]}\right)$$

Problem 263: Result unnecessarily involves imaginary or complex numbers.

$$\int\frac{\text{Sec}[a+b\,x]^5}{\left(d\,\text{Tan}[a+b\,x]\right)^{3/2}}\,dx$$

Optimal (type 4, 138 leaves, 6 steps):

$$-\frac{2\,\text{Sec}[a+b\,x]^3}{b\,d\,\sqrt{d\,\text{Tan}[a+b\,x]}}-\frac{24\,\text{Cos}[a+b\,x]\,\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\,\sqrt{d\,\text{Tan}[a+b\,x]}}{5\,b\,d^2\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}}+\frac{24\,\text{Cos}[a+b\,x]\,\left(d\,\text{Tan}[a+b\,x]\right)^{3/2}}{5\,b\,d^3}+\frac{12\,\text{Sec}[a+b\,x]\,\left(d\,\text{Tan}[a+b\,x]\right)^{3/2}}{5\,b\,d^3}$$

Result (type 4, 151 leaves):

$$-\left(\left(2 \operatorname{Sin}[a+b x]\left((2+3 \operatorname{Cos}[2(a+b x)]) \operatorname{Sec}[a+b x]^4+12(-1)^{3/4} \operatorname{EllipticE}\left[i \operatorname{ArcSinh}\left[(-1)^{1/4} \sqrt{\operatorname{Tan}[a+b x]}\right],-1\right] \sqrt{\operatorname{Sec}[a+b x]^2} \sqrt{\operatorname{Tan}[a+b x]}-12(-1)^{3/4} \operatorname{EllipticF}\left[i \operatorname{ArcSinh}\left[(-1)^{1/4} \sqrt{\operatorname{Tan}[a+b x]}\right],-1\right] \sqrt{\operatorname{Sec}[a+b x]^2} \sqrt{\operatorname{Tan}[a+b x]}\right)\right) \Big/ \left(5 b (d \operatorname{Tan}[a+b x])^{3/2}\right)\right)$$

Problem 264: Result unnecessarily involves imaginary or complex numbers.

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

Optimal (type 4, 104 leaves, 5 steps):

$$-\frac{2 \operatorname{Sec}[a+b x]}{b d \sqrt{d \operatorname{Tan}[a+b x]}}-\frac{4 \operatorname{Cos}[a+b x] \operatorname{EllipticE}\left[a-\frac{\pi}{4}+b x, 2\right] \sqrt{d \operatorname{Tan}[a+b x]}}{b d^2 \sqrt{\operatorname{Sin}[2 a+2 b x]}}+\frac{4 \operatorname{Cos}[a+b x] (d \operatorname{Tan}[a+b x])^{3/2}}{b d^3}$$

Result (type 4, 136 leaves):

$$-\left(\left(2 \operatorname{Sin}[a+b x]\left(\operatorname{Sec}[a+b x]^2+2(-1)^{3/4} \operatorname{EllipticE}\left[i \operatorname{ArcSinh}\left[(-1)^{1/4} \sqrt{\operatorname{Tan}[a+b x]}\right],-1\right] \sqrt{\operatorname{Sec}[a+b x]^2} \sqrt{\operatorname{Tan}[a+b x]}-2(-1)^{3/4} \operatorname{EllipticF}\left[i \operatorname{ArcSinh}\left[(-1)^{1/4} \sqrt{\operatorname{Tan}[a+b x]}\right],-1\right] \sqrt{\operatorname{Sec}[a+b x]^2} \sqrt{\operatorname{Tan}[a+b x]}\right)\right) \Big/ \left(b (d \operatorname{Tan}[a+b x])^{3/2}\right)\right)$$

Problem 265: Result unnecessarily involves imaginary or complex numbers.

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

Optimal (type 4, 78 leaves, 4 steps):

$$-\frac{2 \operatorname{Cos}[a+b x]}{b d \sqrt{d \operatorname{Tan}[a+b x]}}-\frac{2 \operatorname{Cos}[a+b x] \operatorname{EllipticE}\left[a-\frac{\pi}{4}+b x, 2\right] \sqrt{d \operatorname{Tan}[a+b x]}}{b d^2 \sqrt{\operatorname{Sin}[2 a+2 b x]}}$$

Result (type 4, 135 leaves):

$$-\left(\left(2 \operatorname{Sin}[a+b x]\left(\operatorname{Sec}[a+b x]^2+(-1)^{3/4} \operatorname{EllipticE}\left[i \operatorname{ArcSinh}\left[(-1)^{1/4} \sqrt{\operatorname{Tan}[a+b x]}\right],-1\right] \sqrt{\operatorname{Sec}[a+b x]^2} \sqrt{\operatorname{Tan}[a+b x]}-(-1)^{3/4} \operatorname{EllipticF}\left[i \operatorname{ArcSinh}\left[(-1)^{1/4} \sqrt{\operatorname{Tan}[a+b x]}\right],-1\right] \sqrt{\operatorname{Sec}[a+b x]^2} \sqrt{\operatorname{Tan}[a+b x]}\right)\right) \Big/ \left(b (d \operatorname{Tan}[a+b x])^{3/2}\right)\right)$$

Problem 266: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Cos}[a+b\,x]}{(d\,\text{Tan}[a+b\,x])^{3/2}}\,dx$$

Optimal (type 4, 78 leaves, 4 steps):

$$-\frac{2\,\text{Cos}[a+b\,x]}{b\,d\,\sqrt{d\,\text{Tan}[a+b\,x]}}-\frac{3\,\text{Cos}[a+b\,x]\,\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\,\sqrt{d\,\text{Tan}[a+b\,x]}}{b\,d^2\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}}$$

Result (type 4, 142 leaves):

$$\frac{1}{2\,b\,d^2}\text{Csc}[a+b\,x]\left(-5+\text{Cos}[2\,(a+b\,x)]-\frac{1}{\sqrt{\text{Sec}[a+b\,x]^2}}\right.$$
$$6\,(-1)^{3/4}\,\text{EllipticE}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],\,-1\right]\,\sqrt{\text{Tan}[a+b\,x]}+\frac{1}{\sqrt{\text{Sec}[a+b\,x]^2}}$$
$$\left.6\,(-1)^{3/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],\,-1\right]\,\sqrt{\text{Tan}[a+b\,x]}\right)\sqrt{d\,\text{Tan}[a+b\,x]}$$

Problem 267: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Cos}[a+b\,x]^3}{(d\,\text{Tan}[a+b\,x])^{3/2}}\,dx$$

Optimal (type 4, 112 leaves, 5 steps):

$$-\frac{2\,\text{Cos}[a+b\,x]^3}{b\,d\,\sqrt{d\,\text{Tan}[a+b\,x]}}-$$
$$\frac{7\,\text{Cos}[a+b\,x]\,\text{EllipticE}\left[a-\frac{\pi}{4}+b\,x,\,2\right]\,\sqrt{d\,\text{Tan}[a+b\,x]}}{2\,b\,d^2\,\sqrt{\text{Sin}[2\,a+2\,b\,x]}}-\frac{7\,\text{Cos}[a+b\,x]^3\,(d\,\text{Tan}[a+b\,x])^{3/2}}{3\,b\,d^3}$$

Result (type 4, 152 leaves):

$$\frac{1}{24\,b\,d^2}\text{Csc}[a+b\,x]\left(-67+18\,\text{Cos}[2\,(a+b\,x)]+\text{Cos}[4\,(a+b\,x)]-\frac{1}{\sqrt{\text{Sec}[a+b\,x]^2}}\right.$$
$$84\,(-1)^{3/4}\,\text{EllipticE}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],\,-1\right]\,\sqrt{\text{Tan}[a+b\,x]}+\frac{1}{\sqrt{\text{Sec}[a+b\,x]^2}}$$
$$\left.84\,(-1)^{3/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\,\sqrt{\text{Tan}[a+b\,x]}\right],\,-1\right]\,\sqrt{\text{Tan}[a+b\,x]}\right)\sqrt{d\,\text{Tan}[a+b\,x]}$$

Problem 268: Result unnecessarily involves imaginary or complex numbers.

$$\int \frac{\text{Cos}[a+b x]^5}{(d\,\text{Tan}[a+b x])^{3/2}}\,dx$$

Optimal (type 4, 142 leaves, 6 steps):

$$-\frac{2\,\text{Cos}[a+b x]^5}{b\,d\,\sqrt{d\,\text{Tan}[a+b x]}}-\frac{77\,\text{Cos}[a+b x]\,\text{EllipticE}\left[a-\frac{\pi}{4}+b x,2\right]\sqrt{d\,\text{Tan}[a+b x]}}{20\,b\,d^2\,\sqrt{\text{Sin}[2 a+2 b x]}}-\frac{77\,\text{Cos}[a+b x]^3\,(d\,\text{Tan}[a+b x])^{3/2}}{30\,b\,d^3}-\frac{11\,\text{Cos}[a+b x]^5\,(d\,\text{Tan}[a+b x])^{3/2}}{5\,b\,d^3}$$

Result (type 4, 164 leaves):

$$\frac{1}{480\,b\,d^2}\text{Csc}[a+b x]\left(-1444+441\,\text{Cos}[2(a+b x)]+40\,\text{Cos}[4(a+b x)]+3\,\text{Cos}[6(a+b x)]-\frac{1}{\sqrt{\text{Sec}[a+b x]^2}}1848\,(-1)^{3/4}\,\text{EllipticE}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b x]}\right],-1\right]\sqrt{\text{Tan}[a+b x]}+\frac{1}{\sqrt{\text{Sec}[a+b x]^2}}1848\,(-1)^{3/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b x]}\right],-1\right]\sqrt{\text{Tan}[a+b x]}\right)\sqrt{d\,\text{Tan}[a+b x]}$$

Problem 269: Result unnecessarily involves imaginary or complex numbers.

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

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

$$-\frac{2\,\text{Sec}[a+b x]}{3\,b\,d\,(d\,\text{Tan}[a+b x])^{3/2}}-\frac{\text{EllipticF}\left[a-\frac{\pi}{4}+b x,2\right]\text{Sec}[a+b x]\sqrt{\text{Sin}[2 a+2 b x]}}{3\,b\,d^2\,\sqrt{d\,\text{Tan}[a+b x]}}$$

Result (type 4, 113 leaves):

$$\left(2\,\text{Cos}[2(a+b x)]\,\text{Csc}[a+b x]\,\sqrt{\text{Sec}[a+b x]^2}\left(\sqrt{\text{Sec}[a+b x]^2}-(-1)^{1/4}\,\text{EllipticF}\left[i\,\text{ArcSinh}\left[(-1)^{1/4}\sqrt{\text{Tan}[a+b x]}\right],-1\right]\text{Tan}[a+b x]^{3/2}\right)\right)\Big/\left(3\,b\,d^2\,\sqrt{d\,\text{Tan}[a+b x]}\,\left(-1+\text{Tan}[a+b x]^2\right)\right)$$

Problem 270: Result unnecessarily involves imaginary or complex numbers.

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

Optimal (type 4, 110 leaves, 5 steps):

$$-\frac{2\,\mathrm{Sec}[a+b\,x]}{5\,b\,d\,(d\,\mathrm{Tan}[a+b\,x])^{5/2}}-\frac{4\,\mathrm{Cos}[a+b\,x]}{5\,b\,d^3\,\sqrt{d\,\mathrm{Tan}[a+b\,x]}}-\frac{4\,\mathrm{Cos}[a+b\,x]\,\mathrm{EllipticE}\left[a-\frac{\pi}{4}+b\,x,2\right]\sqrt{d\,\mathrm{Tan}[a+b\,x]}}{5\,b\,d^4\,\sqrt{\mathrm{Sin}[2\,a+2\,b\,x]}}$$

Result (type 4, 153 leaves):

$$\Big(4\,\mathrm{Cos}[a+b\,x]\,\Big((-3+\mathrm{Cos}[2\,(a+b\,x)])\,\mathrm{Csc}[2\,(a+b\,x)]^2-(-1)^{3/4}\,\mathrm{EllipticE}\left[i\,\mathrm{ArcSinh}\left[(-1)^{1/4}\sqrt{\mathrm{Tan}[a+b\,x]}\right],-1\right]\sqrt{\mathrm{Sec}[a+b\,x]^2}\,\sqrt{\mathrm{Tan}[a+b\,x]}+(-1)^{3/4}\,\mathrm{EllipticF}\left[i\,\mathrm{ArcSinh}\left[(-1)^{1/4}\sqrt{\mathrm{Tan}[a+b\,x]}\right],-1\right]\sqrt{\mathrm{Sec}[a+b\,x]^2}\,\sqrt{\mathrm{Tan}[a+b\,x]}\Big)\Big)\Big/\left(5\,b\,d^3\,\sqrt{d\,\mathrm{Tan}[a+b\,x]}\right)$$

Problem 292: Result unnecessarily involves higher level functions.

$$\int (d\,\mathrm{Sec}[e+f\,x])^{3/2}\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}\,dx$$

Optimal (type 4, 93 leaves, 4 steps):

$$-\frac{d^2\,\mathrm{EllipticE}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f\,x\right),2\right]\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{f\,\sqrt{d\,\mathrm{Sec}[e+f\,x]}\,\sqrt{\mathrm{Sin}[e+f\,x]}}+\frac{d^2\,(b\,\mathrm{Tan}[e+f\,x])^{3/2}}{b\,f\,\sqrt{d\,\mathrm{Sec}[e+f\,x]}}$$

Result (type 5, 64 leaves):

$$\left(2\,b\,\mathrm{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{7}{4},\mathrm{Sec}[e+f\,x]^2\right]\,(d\,\mathrm{Sec}[e+f\,x])^{3/2}\,\left(-\mathrm{Tan}[e+f\,x]^2\right)^{1/4}\right)\Big/\left(3\,f\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}\right)$$

Problem 294: Result unnecessarily involves higher level functions.

$$\int \frac{\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{\sqrt{d\,\mathrm{Sec}[e+f\,x]}}\,dx$$

Optimal (type 4, 55 leaves, 3 steps):

$$\frac{2\,\mathrm{EllipticE}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f\,x\right),2\right]\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{f\,\sqrt{d\,\mathrm{Sec}[e+f\,x]}\,\sqrt{\mathrm{Sin}[e+f\,x]}}$$

Result (type 5, 78 leaves):

$$-\left(\left(2\,(b\,\mathrm{Tan}[e+f\,x])^{3/2}\left(-3+2\,\mathrm{Csc}[e+f\,x]^2\,\mathrm{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{7}{4},\mathrm{Sec}[e+f\,x]^2\right]\left(-\mathrm{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(3\,b\,f\,\sqrt{d\,\mathrm{Sec}[e+f\,x]}\right)\right)$$

Problem 296: Result unnecessarily involves higher level functions.

$$\int \frac{\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{(d\,\mathrm{Sec}[e+f\,x])^{5/2}}\,dx$$

Optimal (type 4, 95 leaves, 4 steps):

$$\frac{4\,\mathrm{EllipticE}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f\,x\right),2\right]\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{5\,d^2\,f\,\sqrt{d\,\mathrm{Sec}[e+f\,x]}\,\sqrt{\mathrm{Sin}[e+f\,x]}}+\frac{2\,(b\,\mathrm{Tan}[e+f\,x])^{3/2}}{5\,b\,f\,(d\,\mathrm{Sec}[e+f\,x])^{5/2}}$$

Result (type 5, 92 leaves):

$$\left((b\,\mathrm{Tan}[e+f\,x])^{3/2}\left(3\,(5+\mathrm{Cos}[2\,(e+f\,x)])-8\,\mathrm{Csc}[e+f\,x]^2\,\mathrm{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{7}{4},\mathrm{Sec}[e+f\,x]^2\right]\left(-\mathrm{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(15\,b\,d^2\,f\,\sqrt{d\,\mathrm{Sec}[e+f\,x]}\right)$$

Problem 298: Result unnecessarily involves higher level functions.

$$\int \frac{\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{(d\,\mathrm{Sec}[e+f\,x])^{9/2}}\,dx$$

Optimal (type 4, 132 leaves, 5 steps):

$$\frac{8\,\mathrm{EllipticE}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f\,x\right),2\right]\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{15\,d^4\,f\,\sqrt{d\,\mathrm{Sec}[e+f\,x]}\,\sqrt{\mathrm{Sin}[e+f\,x]}}+\frac{2\,(b\,\mathrm{Tan}[e+f\,x])^{3/2}}{9\,b\,f\,(d\,\mathrm{Sec}[e+f\,x])^{9/2}}+\frac{4\,(b\,\mathrm{Tan}[e+f\,x])^{3/2}}{15\,b\,d^2\,f\,(d\,\mathrm{Sec}[e+f\,x])^{5/2}}$$

Result (type 5, 102 leaves):

$$\left((b\,\mathrm{Tan}[e+f\,x])^{3/2}\left(44\,\mathrm{Cos}[2\,(e+f\,x)]+5\,(27+\mathrm{Cos}[4\,(e+f\,x)])-64\,\mathrm{Csc}[e+f\,x]^2\,\mathrm{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{7}{4},\mathrm{Sec}[e+f\,x]^2\right]\left(-\mathrm{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(180\,b\,d^4\,f\,\sqrt{d\,\mathrm{Sec}[e+f\,x]}\right)$$

Problem 299: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 131 leaves, 5 steps):

$$-\frac{b^2\,d^2\,\text{EllipticF}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f\,x\right),2\right]\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{\text{Sin}[e+f\,x]}}{6\,f\,\sqrt{b\,\text{Tan}[e+f\,x]}}-\frac{b\,d^2\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{b\,\text{Tan}[e+f\,x]}}{6\,f}+\frac{b\,(d\,\text{Sec}[e+f\,x])^{5/2}\,\sqrt{b\,\text{Tan}[e+f\,x]}}{3\,f}$$

Result (type 5, 95 leaves):

$$\left(b\,d^2\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{b\,\text{Tan}[e+f\,x]}\left(\text{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{5}{4},\text{Sec}[e+f\,x]^2\right]+\left(-1+2\,\text{Sec}[e+f\,x]^2\right)\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(6\,f\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)$$

Problem 300: Result unnecessarily involves higher level functions.

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

Optimal (type 3, 169 leaves, 7 steps):

$$-\frac{b^{3/2}\,d\,\text{ArcTan}\left[\frac{\sqrt{b\,\text{Sin}[e+f\,x]}}{\sqrt{b}}\right]\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{b\,\text{Sin}[e+f\,x]}}{4\,f\,\sqrt{b\,\text{Tan}[e+f\,x]}}-\frac{b^{3/2}\,d\,\text{ArcTanh}\left[\frac{\sqrt{b\,\text{Sin}[e+f\,x]}}{\sqrt{b}}\right]\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{b\,\text{Sin}[e+f\,x]}}{4\,f\,\sqrt{b\,\text{Tan}[e+f\,x]}}+\frac{b\,(d\,\text{Sec}[e+f\,x])^{3/2}\,\sqrt{b\,\text{Tan}[e+f\,x]}}{2\,f}$$

Result (type 5, 81 leaves):

$$\left(b\,(d\,\text{Sec}[e+f\,x])^{3/2}\,\sqrt{b\,\text{Tan}[e+f\,x]}\left(\text{Hypergeometric2F1}\left[\frac{3}{4},\frac{3}{4},\frac{7}{4},\text{Sec}[e+f\,x]^2\right]+3\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(6\,f\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)$$

Problem 301: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 88 leaves, 4 steps):

$$-\frac{b^2\,\text{EllipticF}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f\,x\right),2\right]\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{\text{Sin}[e+f\,x]}}{f\,\sqrt{b\,\text{Tan}[e+f\,x]}}+\frac{b\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{b\,\text{Tan}[e+f\,x]}}{f}$$

Result (type 5, 76 leaves):

$$\left(b\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{b\,\text{Tan}[e+f\,x]}\left(\text{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{5}{4},\text{Sec}[e+f\,x]^2\right]+\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(f\,\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)$$

Problem 302: Result unnecessarily involves higher level functions.

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

Optimal (type 3, 167 leaves, 7 steps):

$$-\frac{2\,d\,\text{Csc}[e+f\,x]\,(b\,\text{Tan}[e+f\,x])^{3/2}}{f\,(d\,\text{Sec}[e+f\,x])^{3/2}}+\frac{b^{3/2}\,d\,\text{ArcTan}\left[\frac{\sqrt{b\,\text{Sin}[e+f\,x]}}{\sqrt{b}}\right]\,(b\,\text{Tan}[e+f\,x])^{3/2}}{f\,(d\,\text{Sec}[e+f\,x])^{3/2}\,(b\,\text{Sin}[e+f\,x])^{3/2}}+\frac{b^{3/2}\,d\,\text{ArcTanh}\left[\frac{\sqrt{b\,\text{Sin}[e+f\,x]}}{\sqrt{b}}\right]\,(b\,\text{Tan}[e+f\,x])^{3/2}}{f\,(d\,\text{Sec}[e+f\,x])^{3/2}\,(b\,\text{Sin}[e+f\,x])^{3/2}}$$

Result (type 5, 75 leaves):

$$\left(2\,b\,\sqrt{b\,\text{Tan}[e+f\,x]}\left(-3+\text{Csc}[e+f\,x]^2\,\text{Hypergeometric2F1}\left[\frac{3}{4},\frac{3}{4},\frac{7}{4},\text{Sec}[e+f\,x]^2\right]\left(-\text{Tan}[e+f\,x]^2\right)^{3/4}\right)\right)\Big/\left(3\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\right)$$

Problem 303: Result unnecessarily involves higher level functions.

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

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

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

Result (type 5, 91 leaves):

$$-\left(\left(2\,b\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{b\,\text{Tan}[e+f\,x]}\,\left(\text{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{5}{4},\text{Sec}[e+f\,x]^2\right]+\text{Cos}[e+f\,x]^2\,\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(3\,d^2\,f\,\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)$$

Problem 304: Result more than twice size of optimal antiderivative.

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

Optimal (type 3, 34 leaves, 1 step):

$$\frac{2\,(b\,\text{Tan}[e+f\,x])^{5/2}}{5\,b\,f\,(d\,\text{Sec}[e+f\,x])^{5/2}}$$

Result (type 3, 141 leaves):

$$-\left(\left(b\,\text{Sec}[e+f\,x]^{3/2}\left(\sqrt{\frac{1}{1+\text{Cos}[e+f\,x]}}\,\sqrt{\text{Sec}[e+f\,x]}+\sqrt{\frac{1}{1+\text{Cos}[e+f\,x]}}\,\text{Cos}[3\,(e+f\,x)]\,\text{Sec}[e+f\,x]^{3/2}-\text{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\sqrt{1+\text{Sec}[e+f\,x]}\right)\sqrt{b\,\text{Tan}[e+f\,x]}\right)\Big/\left(10\,f\,\sqrt{\frac{1}{1+\text{Cos}[e+f\,x]}}\,(d\,\text{Sec}[e+f\,x])^{5/2}\right)\right)$$

Problem 305: Result unnecessarily involves higher level functions.

$$\int \frac{(b\,\text{Tan}[e+f\,x])^{3/2}}{(d\,\text{Sec}[e+f\,x])^{7/2}}\,dx$$

Optimal (type 4, 131 leaves, 5 steps):

$$\frac{4\,b^2\,\text{EllipticF}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f\,x\right),2\right]\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{\text{Sin}[e+f\,x]}}{21\,d^4\,f\,\sqrt{b\,\text{Tan}[e+f\,x]}}-\frac{2\,b\,\sqrt{b\,\text{Tan}[e+f\,x]}}{7\,f\,(d\,\text{Sec}[e+f\,x])^{7/2}}+\frac{2\,b\,\sqrt{b\,\text{Tan}[e+f\,x]}}{21\,d^2\,f\,(d\,\text{Sec}[e+f\,x])^{3/2}}$$

Result (type 5, 105 leaves):

$$-\left(\left(b\,\sqrt{b\,\text{Tan}[e+f\,x]}\,\left(4\,\text{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{5}{4},\text{Sec}[e+f\,x]^2\right]\text{Sec}[e+f\,x]^2+(1+3\,\text{Cos}[2\,(e+f\,x)])\,\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(21\,d^2\,f\,(d\,\text{Sec}[e+f\,x])^{3/2}\,\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)$$

Problem 308: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 131 leaves, 5 steps):

$$\frac{b^2 d^2 \operatorname{EllipticE}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f x\right), 2\right] \sqrt{b \operatorname{Tan}[e+f x]}}{2 f \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{\operatorname{Sin}[e+f x]}}-\frac{b d^2 (b \operatorname{Tan}[e+f x])^{3/2}}{2 f \sqrt{d \operatorname{Sec}[e+f x]}}+\frac{b (d \operatorname{Sec}[e+f x])^{3/2} (b \operatorname{Tan}[e+f x])^{3/2}}{3 f}$$

Result (type 5, 86 leaves):

$$\left(b d^2 \operatorname{Csc}[e+f x]^2 (b \operatorname{Tan}[e+f x])^{3/2} \left(\operatorname{Tan}[e+f x]^2-\operatorname{Hypergeometric2F1}\left[\frac{1}{4}, \frac{3}{4}, \frac{7}{4}, \operatorname{Sec}[e+f x]^2\right] \left(-\operatorname{Tan}[e+f x]^2\right)^{1/4}\right)\right) \Big/ \left(3 f \sqrt{d \operatorname{Sec}[e+f x]}\right)$$

Problem 310: Result unnecessarily involves higher level functions.

$$\int \frac{(b \operatorname{Tan}[e+f x])^{5/2}}{\sqrt{d \operatorname{Sec}[e+f x]}} \, dx$$

Optimal (type 4, 88 leaves, 4 steps):

$$-\frac{3 b^2 \operatorname{EllipticE}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f x\right), 2\right] \sqrt{b \operatorname{Tan}[e+f x]}}{f \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{\operatorname{Sin}[e+f x]}}+\frac{b (b \operatorname{Tan}[e+f x])^{3/2}}{f \sqrt{d \operatorname{Sec}[e+f x]}}$$

Result (type 5, 81 leaves):

$$\left(b \operatorname{Csc}[e+f x]^2 (b \operatorname{Tan}[e+f x])^{3/2} \left(-1+\operatorname{Cos}[2 (e+f x)]+2 \operatorname{Hypergeometric2F1}\left[\frac{1}{4}, \frac{3}{4}, \frac{7}{4}, \operatorname{Sec}[e+f x]^2\right] \left(-\operatorname{Tan}[e+f x]^2\right)^{1/4}\right)\right) \Big/ \left(f \sqrt{d \operatorname{Sec}[e+f x]}\right)$$

Problem 312: Result unnecessarily involves higher level functions.

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

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

$$\frac{6 b^2 \operatorname{EllipticE}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f x\right), 2\right] \sqrt{b \operatorname{Tan}[e+f x]}}{5 d^2 f \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{\operatorname{Sin}[e+f x]}}-\frac{2 b (b \operatorname{Tan}[e+f x])^{3/2}}{5 f (d \operatorname{Sec}[e+f x])^{5/2}}$$

Result (type 5, 87 leaves):

$$-\left(\left(b\,(b\,\mathrm{Tan}[e+f\,x])^{3/2}\left(-5+\mathrm{Cos}[2\,(e+f\,x)]+4\,\mathrm{Csc}[e+f\,x]^2\,\mathrm{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{7}{4},\mathrm{Sec}[e+f\,x]^2\right]\left(-\mathrm{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(5\,d^2\,f\,\sqrt{d\,\mathrm{Sec}[e+f\,x]}\right)\right)$$

Problem 314: Result unnecessarily involves higher level functions.

$$\int\frac{(b\,\mathrm{Tan}[e+f\,x])^{5/2}}{(d\,\mathrm{Sec}[e+f\,x])^{9/2}}\,dx$$

Optimal (type 4, 131 leaves, 5 steps):

$$\frac{4\,b^2\,\mathrm{EllipticE}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f\,x\right),2\right]\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{15\,d^4\,f\,\sqrt{d\,\mathrm{Sec}[e+f\,x]}\,\sqrt{\mathrm{Sin}[e+f\,x]}}-\frac{2\,b\,(b\,\mathrm{Tan}[e+f\,x])^{3/2}}{9\,f\,(d\,\mathrm{Sec}[e+f\,x])^{9/2}}+\frac{2\,b\,(b\,\mathrm{Tan}[e+f\,x])^{3/2}}{15\,d^2\,f\,(d\,\mathrm{Sec}[e+f\,x])^{5/2}}$$

Result (type 5, 100 leaves):

$$-\left(\left(b\,(b\,\mathrm{Tan}[e+f\,x])^{3/2}\left(8\,\mathrm{Cos}[2\,(e+f\,x)]+5\,(-9+\mathrm{Cos}[4\,(e+f\,x)])+32\,\mathrm{Csc}[e+f\,x]^2\,\mathrm{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{7}{4},\mathrm{Sec}[e+f\,x]^2\right]\left(-\mathrm{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(180\,d^4\,f\,\sqrt{d\,\mathrm{Sec}[e+f\,x]}\right)\right)$$

Problem 315: Result unnecessarily involves higher level functions.

$$\int\frac{(d\,\mathrm{Sec}[e+f\,x])^{7/2}}{\sqrt{b\,\mathrm{Tan}[e+f\,x]}}\,dx$$

Optimal (type 3, 178 leaves, 7 steps):

$$\frac{3\,d^3\,\mathrm{ArcTan}\left[\frac{\sqrt{b\,\mathrm{Sin}[e+f\,x]}}{\sqrt{b}}\right]\sqrt{d\,\mathrm{Sec}[e+f\,x]}\,\sqrt{b\,\mathrm{Sin}[e+f\,x]}}{4\,\sqrt{b}\,f\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}}+\frac{3\,d^3\,\mathrm{ArcTanh}\left[\frac{\sqrt{b\,\mathrm{Sin}[e+f\,x]}}{\sqrt{b}}\right]\sqrt{d\,\mathrm{Sec}[e+f\,x]}\,\sqrt{b\,\mathrm{Sin}[e+f\,x]}}{4\,\sqrt{b}\,f\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}}+\frac{d^2\,(d\,\mathrm{Sec}[e+f\,x])^{3/2}\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{2\,b\,f}$$

Result (type 5, 87 leaves):

$$\left(d\,(d\,\mathrm{Sec}[e+f\,x])^{5/2}\,\mathrm{Sin}[e+f\,x]\left(-\mathrm{Hypergeometric2F1}\left[\frac{3}{4},\frac{3}{4},\frac{7}{4},\mathrm{Sec}[e+f\,x]^2\right]+\left(-\mathrm{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(2\,f\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}\,\left(-\mathrm{Tan}[e+f\,x]^2\right)^{1/4}\right)$$

Problem 316: Result unnecessarily involves higher level functions.

$$\int\frac{(d\,\mathrm{Sec}[e+f\,x])^{5/2}}{\sqrt{b\,\mathrm{Tan}[e+f\,x]}}\,dx$$

Optimal (type 4, 92 leaves, 4 steps):

$$\frac{d^2\,\mathrm{EllipticF}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f\,x\right),2\right]\sqrt{d\,\mathrm{Sec}[e+f\,x]}\,\sqrt{\mathrm{Sin}[e+f\,x]}}{f\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}}+\frac{d^2\,\sqrt{d\,\mathrm{Sec}[e+f\,x]}\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{b\,f}$$

Result (type 5, 84 leaves):

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

Problem 317: Result unnecessarily involves higher level functions.

$$\int\frac{(d\,\mathrm{Sec}[e+f\,x])^{3/2}}{\sqrt{b\,\mathrm{Tan}[e+f\,x]}}\,dx$$

Optimal (type 3, 131 leaves, 6 steps):

$$\frac{d\,\mathrm{ArcTan}\left[\frac{\sqrt{b\,\mathrm{Sin}[e+f\,x]}}{\sqrt{b}}\right]\sqrt{d\,\mathrm{Sec}[e+f\,x]}\,\sqrt{b\,\mathrm{Sin}[e+f\,x]}}{\sqrt{b}\,f\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}}+\frac{d\,\mathrm{ArcTanh}\left[\frac{\sqrt{b\,\mathrm{Sin}[e+f\,x]}}{\sqrt{b}}\right]\sqrt{d\,\mathrm{Sec}[e+f\,x]}\,\sqrt{b\,\mathrm{Sin}[e+f\,x]}}{\sqrt{b}\,f\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}}$$

Result (type 5, 66 leaves):

$$-\left(\left(2\,\mathrm{Hypergeometric2F1}\left[\frac{3}{4},\frac{3}{4},\frac{7}{4},\mathrm{Sec}[e+f\,x]^2\right]\,(d\,\mathrm{Sec}[e+f\,x])^{3/2}\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}\right)\Big/\left(3\,b\,f\,\left(-\mathrm{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)$$

Problem 318: Result unnecessarily involves higher level functions.

$$\int \frac{\sqrt{d \operatorname{Sec}[e+f x]}}{\sqrt{b \operatorname{Tan}[e+f x]}} \, dx$$

Optimal (type 4, 55 leaves, 3 steps):

$$\frac{2 \operatorname{EllipticF}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f x\right), 2\right] \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{\operatorname{Sin}[e+f x]}}{f \sqrt{b \operatorname{Tan}[e+f x]}}$$

Result (type 5, 64 leaves):

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

Problem 320: Result unnecessarily involves higher level functions.

$$\int \frac{1}{(d \operatorname{Sec}[e+f x])^{3/2} \sqrt{b \operatorname{Tan}[e+f x]}} \, dx$$

Optimal (type 4, 95 leaves, 4 steps):

$$\frac{4 \operatorname{EllipticF}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f x\right), 2\right] \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{\operatorname{Sin}[e+f x]}}{3 d^2 f \sqrt{b \operatorname{Tan}[e+f x]}}+\frac{2 \sqrt{b \operatorname{Tan}[e+f x]}}{3 b f (d \operatorname{Sec}[e+f x])^{3/2}}$$

Result (type 5, 91 leaves):

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

Problem 323: Result unnecessarily involves higher level functions.

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

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

$$-\frac{2 d^2}{b f \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{b \operatorname{Tan}[e+f x]}}-\frac{2 d^2 \operatorname{EllipticE}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f x\right), 2\right] \sqrt{b \operatorname{Tan}[e+f x]}}{b^2 f \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{\operatorname{Sin}[e+f x]}}$$

Result (type 5, 70 leaves):

$$\left(2\,(d\,\text{Sec}[e+f\,x])^{3/2}\left(-3+2\,\text{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{7}{4},\text{Sec}[e+f\,x]^2\right]\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(3\,b\,f\,\sqrt{b\,\text{Tan}[e+f\,x]}\right)$$

Problem 325: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 91 leaves, 4 steps):

$$-\frac{2}{b\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{b\,\text{Tan}[e+f\,x]}}-\frac{4\,\text{EllipticE}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f\,x\right),2\right]\sqrt{b\,\text{Tan}[e+f\,x]}}{b^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{\text{Sin}[e+f\,x]}}$$

Result (type 5, 88 leaves):

$$\left(\text{Sec}[e+f\,x]^2\left(-9+3\,\text{Cos}[2\,(e+f\,x)]+8\,\text{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{7}{4},\text{Sec}[e+f\,x]^2\right]\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(3\,b\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{b\,\text{Tan}[e+f\,x]}\right)$$

Problem 327: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 130 leaves, 5 steps):

$$-\frac{2}{b\,f\,(d\,\text{Sec}[e+f\,x])^{5/2}\,\sqrt{b\,\text{Tan}[e+f\,x]}}-\frac{24\,\text{EllipticE}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f\,x\right),2\right]\sqrt{b\,\text{Tan}[e+f\,x]}}{5\,b^2\,d^2\,f\,\sqrt{d\,\text{Sec}[e+f\,x]}\,\sqrt{\text{Sin}[e+f\,x]}}-\frac{12\,(b\,\text{Tan}[e+f\,x])^{3/2}}{5\,b^3\,f\,(d\,\text{Sec}[e+f\,x])^{5/2}}$$

Result (type 5, 91 leaves):

$$\left((d\,\text{Sec}[e+f\,x])^{3/2}\left(-69+28\,\text{Cos}[2\,(e+f\,x)]+\text{Cos}[4\,(e+f\,x)]+64\,\text{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{7}{4},\text{Sec}[e+f\,x]^2\right]\left(-\text{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(20\,b\,d^4\,f\,\sqrt{b\,\text{Tan}[e+f\,x]}\right)$$

Problem 328: Result unnecessarily involves higher level functions.

$$\int\frac{(d\,\text{Sec}[e+f\,x])^{7/2}}{(b\,\text{Tan}[e+f\,x])^{5/2}}\,dx$$

Optimal (type 3, 172 leaves, 7 steps):

$$-\frac{2 d^2 (d \operatorname{Sec}[e+f x])^{3/2}}{3 b f (b \operatorname{Tan}[e+f x])^{3/2}}+\frac{d^3 \operatorname{ArcTan}\left[\frac{\sqrt{b \operatorname{Sin}[e+f x]}}{\sqrt{b}}\right] \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{b \operatorname{Sin}[e+f x]}}{b^{5/2} f \sqrt{b \operatorname{Tan}[e+f x]}}+\frac{d^3 \operatorname{ArcTanh}\left[\frac{\sqrt{b \operatorname{Sin}[e+f x]}}{\sqrt{b}}\right] \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{b \operatorname{Sin}[e+f x]}}{b^{5/2} f \sqrt{b \operatorname{Tan}[e+f x]}}$$

Result (type 5, 104 leaves):

$$-\left(\left(2 d^3 \sqrt{d \operatorname{Sec}[e+f x]} \left(\operatorname{Hypergeometric2F1}\left[\frac{3}{4}, \frac{3}{4}, \frac{7}{4}, \operatorname{Sec}[e+f x]^2\right] \operatorname{Sec}[e+f x] \operatorname{Tan}[e+f x]+\operatorname{Csc}[e+f x] \left(-\operatorname{Tan}[e+f x]^2\right)^{1/4}\right)\right) \Big/ \left(3 b^2 f \sqrt{b \operatorname{Tan}[e+f x]} \left(-\operatorname{Tan}[e+f x]^2\right)^{1/4}\right)\right)$$

Problem 329: Result unnecessarily involves higher level functions.

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

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

$$-\frac{2 d^2 \sqrt{d \operatorname{Sec}[e+f x]}}{3 b f (b \operatorname{Tan}[e+f x])^{3/2}}+\frac{2 d^2 \operatorname{EllipticF}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f x\right), 2\right] \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{\operatorname{Sin}[e+f x]}}{3 b^2 f \sqrt{b \operatorname{Tan}[e+f x]}}$$

Result (type 5, 72 leaves):

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

Problem 331: Result unnecessarily involves higher level functions.

$$\int \frac{\sqrt{d \operatorname{Sec}[e+f x]}}{(b \operatorname{Tan}[e+f x])^{5/2}} \, dx$$

Optimal (type 4, 95 leaves, 4 steps):

$$-\frac{2 \sqrt{d \operatorname{Sec}[e+f x]}}{3 b f (b \operatorname{Tan}[e+f x])^{3/2}}-\frac{4 \operatorname{EllipticF}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f x\right), 2\right] \sqrt{d \operatorname{Sec}[e+f x]} \sqrt{\operatorname{Sin}[e+f x]}}{3 b^2 f \sqrt{b \operatorname{Tan}[e+f x]}}$$

Result (type 5, 70 leaves):

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

Problem 333: Result unnecessarily involves higher level functions.

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

Optimal (type 4, 132 leaves, 5 steps):

$$-\frac{2}{3\,b\,f\,(d\,\mathrm{Sec}[e+f\,x])^{3/2}\,(b\,\mathrm{Tan}[e+f\,x])^{3/2}}-\frac{8\,\mathrm{EllipticF}\left[\frac{1}{2}\left(e-\frac{\pi}{2}+f\,x\right),2\right]\sqrt{d\,\mathrm{Sec}[e+f\,x]}\,\sqrt{\mathrm{Sin}[e+f\,x]}}{3\,b^2\,d^2\,f\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}}-\frac{4\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}}{3\,b^3\,f\,(d\,\mathrm{Sec}[e+f\,x])^{3/2}}$$

Result (type 5, 112 leaves):

$$\left(\mathrm{Csc}[e+f\,x]^2\,\sqrt{b\,\mathrm{Tan}[e+f\,x]}\,\left(-\mathrm{Tan}[e+f\,x]^2\right)^{3/4}\left(-8\,\mathrm{Hypergeometric2F1}\left[\frac{1}{4},\frac{3}{4},\frac{5}{4},\mathrm{Sec}[e+f\,x]^2\right]+\left(-1+\mathrm{Cos}[2\,(e+f\,x)]+2\,\mathrm{Csc}[e+f\,x]^2\right)\left(-\mathrm{Tan}[e+f\,x]^2\right)^{1/4}\right)\right)\Big/\left(3\,b^3\,f\,(d\,\mathrm{Sec}[e+f\,x])^{3/2}\right)$$

Problem 354: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \mathrm{Cot}[e+f\,x]\,(b\,\mathrm{Sec}[e+f\,x])^m\,dx$$

Optimal (type 5, 40 leaves, 2 steps):

$$-\frac{\mathrm{Hypergeometric2F1}\left[1,\frac{m}{2},\frac{2+m}{2},\mathrm{Sec}[e+f\,x]^2\right](b\,\mathrm{Sec}[e+f\,x])^m}{f\,m}$$

Result (type 6, 4909 leaves):

$$\Bigg(\mathrm{Cot}\left[\frac{1}{2}(e+f\,x)\right]^2\mathrm{Csc}[e+f\,x]\,\mathrm{Sec}[e+f\,x]^{-1+m}\,(b\,\mathrm{Sec}[e+f\,x])^m\Bigg(\Bigg(\Bigg((-2+m)\,\mathrm{AppellF1}\Big[1-m,-m,1,2-m,\frac{1}{2}\mathrm{Cos}[e+f\,x]\,\mathrm{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2,\mathrm{Cos}[e+f\,x]\,\mathrm{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2\Big]\,\mathrm{Cos}[e+f\,x]\Bigg)\Big/$$
$$\Bigg((-1+m)\Bigg(2\,(-2+m)\,\mathrm{AppellF1}\Big[1-m,-m,1,2-m,\frac{1}{2}\mathrm{Cos}[e+f\,x]\,\mathrm{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2,\mathrm{Cos}[e+f\,x]\,\mathrm{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2\Big]\,\mathrm{Cos}\left[\frac{1}{2}(e+f\,x)\right]^2+$$
$$\Bigg(m\,\mathrm{AppellF1}\Big[2-m,1-m,1,3-m,\frac{1}{2}\mathrm{Cos}[e+f\,x]\,\mathrm{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2,\mathrm{Cos}[e+f\,x]\,\mathrm{Sec}\left[\frac{1}{2}(e+f\,x)\right]^2\Big]-2\,\mathrm{AppellF1}\Big[2-m,-m,2,3-m,\frac{1}{2}\mathrm{Cos}[e+f\,x]$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\left(m\,\text{AppellF1}\left[2-m,1-m,1,3-m,\frac{1}{2}\cos[e+fx]\sec\left[\frac{1}{2}(e+fx)\right]^2,\cos[e+fx]\sec\left[\frac{1}{2}(e+fx)\right]^2\right]-2\,\text{AppellF1}\left[2-m,-m,2,3-m,\frac{1}{2}\cos[e+fx]\sec\left[\frac{1}{2}(e+fx)\right]^2,\cos[e+fx]\sec\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\cos[e+fx]\Bigg)\Bigg)-$$

$$\left(8\,\text{AppellF1}\left[1,m,1-m,2,\tan\left[\frac{1}{2}(e+fx)\right]^2,-\tan\left[\frac{1}{2}(e+fx)\right]^2\right]\csc[e+fx]^2\sin\left[\frac{1}{2}(e+fx)\right]^6\right)\Big/$$

$$\left(2\,\text{AppellF1}\left[1,m,1-m,2,\tan\left[\frac{1}{2}(e+fx)\right]^2,-\tan\left[\frac{1}{2}(e+fx)\right]^2\right]+\left((-1+m)\,\text{AppellF1}\left[2,m,2-m,3,\tan\left[\frac{1}{2}(e+fx)\right]^2,-\tan\left[\frac{1}{2}(e+fx)\right]^2\right]+m\,\text{AppellF1}\left[2,1+m,1-m,3,\tan\left[\frac{1}{2}(e+fx)\right]^2,-\tan\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\tan\left[\frac{1}{2}(e+fx)\right]^2\right)\Bigg)+\cot\left[\frac{1}{2}(e+fx)\right]^2\sec[e+fx]^m$$

$$\Bigg(-\Bigg(\Bigg(\left((-2+m)\,\text{AppellF1}\left[1-m,-m,1,2-m,\frac{1}{2}\cos[e+fx]\sec\left[\frac{1}{2}(e+fx)\right]^2,\cos[e+fx]\sec\left[\frac{1}{2}(e+fx)\right]^2\right]\sin[e+fx]\right)\Big/$$

$$\Bigg((-1+m)\,\Bigg(2(-2+m)\,\text{AppellF1}\left[1-m,-m,1,2-m,\frac{1}{2}\cos[e+fx]\sec\left[\frac{1}{2}(e+fx)\right]^2,\cos[e+fx]\sec\left[\frac{1}{2}(e+fx)\right]^2\right]\cos\left[\frac{1}{2}(e+fx)\right]^2+\Bigg(m\,\text{AppellF1}\left[2-m,1-m,1,3-m,\frac{1}{2}\cos[e+fx]\sec\left[\frac{1}{2}(e+fx)\right]^2,\cos[e+fx]\sec\left[\frac{1}{2}(e+fx)\right]^2\right]-2\,\text{AppellF1}\left[2-m,-m,2,3-m,\frac{1}{2}\cos[e+fx]\sec\left[\frac{1}{2}(e+fx)\right]^2,\cos[e+fx]\sec\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)\cos[e+fx]\Bigg)\Bigg)\Bigg)-$$

$$\left(24\,\text{AppellF1}\left[1,m,1-m,2,\tan\left[\frac{1}{2}(e+fx)\right]^2,-\tan\left[\frac{1}{2}(e+fx)\right]^2\right]\cos\left[\frac{1}{2}(e+fx)\right]\csc[e+fx]^2\sin\left[\frac{1}{2}(e+fx)\right]^5\right)\Big/$$

$$\left(2\,\text{AppellF1}\left[1,m,1-m,2,\tan\left[\frac{1}{2}(e+fx)\right]^2,-\tan\left[\frac{1}{2}(e+fx)\right]^2\right]+\left((-1+m)\,\text{AppellF1}\left[2,m,2-m,3,\tan\left[\frac{1}{2}(e+fx)\right]^2,-\tan\left[\frac{1}{2}(e+fx)\right]^2\right]+m\,\text{AppellF1}\left[2,1+m,1-m,3,\tan\left[\frac{1}{2}(e+fx)\right]^2,-\tan\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\tan\left[\frac{1}{2}(e+fx)\right]^2\right)+\left(16\,\text{AppellF1}\left[1,m,1-m,2,\tan\left[\frac{1}{2}(e+fx)\right]^2,-\tan\left[\frac{1}{2}(e+fx)\right]^2\right]\cot[e+fx]\csc[e+fx]^2\sin\left[\frac{1}{2}(e+fx)\right]^6\right)\Big/$$

$$\Big(2\,\text{AppellF1}\Big[1,\,m,\,1-m,\,2,\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+$$
$$\Big(\Big((-1+m)\,\text{AppellF1}\Big[2,\,m,\,2-m,\,3,\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+$$
$$m\,\text{AppellF1}\Big[2,\,1+m,\,1-m,\,3,\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Big)$$
$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)-\Big(8\,\text{Csc}[e+f\,x]^2\,\text{Sin}\Big[\frac{1}{2}\,(e+f\,x)\Big]^6$$
$$\Big(-\frac{1}{2}\,(1-m)\,\text{AppellF1}\Big[2,\,m,\,2-m,\,3,\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]$$
$$\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]+\frac{1}{2}\,m\,\text{AppellF1}\Big[2,\,1+m,\,1-m,\,3,$$
$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big)\Big/$$
$$\Big(2\,\text{AppellF1}\Big[1,\,m,\,1-m,\,2,\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+\Big((-1+m)$$
$$\text{AppellF1}\Big[2,\,m,\,2-m,\,3,\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+m\,\text{AppellF1}\Big[2,$$
$$1+m,\,1-m,\,3,\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Big)\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)+$$
$$\Big((-2+m)\,\text{Cos}[e+f\,x]\,\Big(-\frac{1}{2-m}(1-m)\,m\,\text{AppellF1}\Big[2-m,\,1-m,\,1,\,3-m,\,\frac{1}{2}\,\text{Cos}[e+f\,x]$$
$$\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,\text{Cos}[e+f\,x]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\Big(-\frac{1}{2}\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2$$
$$\text{Sin}[e+f\,x]+\frac{1}{2}\,\text{Cos}[e+f\,x]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)+\frac{1}{2-m}$$
$$(1-m)\,\text{AppellF1}\Big[2-m,\,-m,\,2,\,3-m,\,\frac{1}{2}\,\text{Cos}[e+f\,x]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$
$$\text{Cos}[e+f\,x]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\Big(-\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Sin}[e+f\,x]+$$
$$\text{Cos}[e+f\,x]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big)\Big)\Big/$$
$$\Big((-1+m)\,\Big(2\,(-2+m)\,\text{AppellF1}\Big[1-m,\,-m,\,1,\,2-m,\,\frac{1}{2}\,\text{Cos}[e+f\,x]$$
$$\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,\text{Cos}[e+f\,x]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\text{Cos}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2+$$
$$\Big(m\,\text{AppellF1}\Big[2-m,\,1-m,\,1,\,3-m,\,\frac{1}{2}\,\text{Cos}[e+f\,x]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$
$$\text{Cos}[e+f\,x]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]-2\,\text{AppellF1}\Big[2-m,\,-m,\,2,\,3-m,\,\frac{1}{2}\,\text{Cos}[$$
$$e+f\,x]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,\text{Cos}[e+f\,x]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Big)\,\text{Cos}[e+f\,x]\Big)\Big)+$$
$$\Big(8\,\text{AppellF1}\Big[1,\,m,\,1-m,\,2,\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\text{Csc}[e+f\,x]^2$$
$$\text{Sin}\Big[\frac{1}{2}\,(e+f\,x)\Big]^6\,\Big(\Big(\Big((-1+m)\,\text{AppellF1}\Big[2,\,m,\,2-m,\,3,\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

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

$$2\,(-2+m)\,\text{Cos}[\tfrac{1}{2}\,(e+f\,x)]^2\,\Big(-\frac{1}{2-m}(1-m)\,m\,\text{AppellF1}[2-m,\,1-m,\,1,$$

$$3-m,\,\tfrac{1}{2}\,\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2,\,\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2]$$

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

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

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

$$\text{Sin}[e+f\,x]+\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2\,\text{Tan}[\tfrac{1}{2}\,(e+f\,x)]\Big)\Big)+$$

$$\text{Cos}[e+f\,x]\,\Big(m\,\Big(\frac{1}{3-m}(1-m)\,(2-m)\,\text{AppellF1}[3-m,\,2-m,\,1,\,4-m,\,\tfrac{1}{2}\,\text{Cos}[e+f\,x]$$

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

$$\text{Sin}[e+f\,x]+\tfrac{1}{2}\,\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2\,\text{Tan}[\tfrac{1}{2}\,(e+f\,x)]\Big)+\frac{1}{3-m}$$

$$(2-m)\,\text{AppellF1}[3-m,\,1-m,\,2,\,4-m,\,\tfrac{1}{2}\,\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2,$$

$$\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2]\,\Big(-\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2\,\text{Sin}[e+f\,x]+$$

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

$$2\,\Big(-\frac{1}{3-m}(2-m)\,m\,\text{AppellF1}[3-m,\,1-m,\,2,\,4-m,\,\tfrac{1}{2}\,\text{Cos}[e+f\,x]\,\text{Sec}[$$

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

$$\text{Sin}[e+f\,x]+\tfrac{1}{2}\,\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2\,\text{Tan}[\tfrac{1}{2}\,(e+f\,x)]\Big)+\frac{1}{3-m}$$

$$2\,(2-m)\,\text{AppellF1}[3-m,\,-m,\,3,\,4-m,\,\tfrac{1}{2}\,\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2,$$

$$\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2]\,\Big(-\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2\,\text{Sin}[e+f\,x]+$$

$$\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2\,\text{Tan}[\tfrac{1}{2}\,(e+f\,x)]\Big)\Big)\Big)\Big)\Big)\Big)\Big/$$

$$\Big(\Big((-1+m)\,\Big(2\,(-2+m)\,\text{AppellF1}[1-m,\,-m,\,1,\,2-m,\,\tfrac{1}{2}\,\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2,$$

$$\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2]\,\text{Cos}[\tfrac{1}{2}\,(e+f\,x)]^2+\Big(m\,\text{AppellF1}[2-m,\,1-m,\,1,$$

$$3-m,\,\tfrac{1}{2}\,\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2,\,\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2]-$$

$$2\,\text{AppellF1}[2-m,\,-m,\,2,\,3-m,\,\tfrac{1}{2}\,\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2,$$

$$\text{Cos}[e+f\,x]\,\text{Sec}[\tfrac{1}{2}\,(e+f\,x)]^2]\Big)\,\text{Cos}[e+f\,x]\Big)^2\Big)\Big)\Big)\Big)$$

Problem 355: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \mathrm{Cot}[e+f x]^3\,(b\,\mathrm{Sec}[e+f x])^m\,dx$$

Optimal (type 5, 39 leaves, 2 steps):

$$\frac{\mathrm{Hypergeometric2F1}\left[2,\frac{m}{2},\frac{2+m}{2},\mathrm{Sec}[e+f x]^2\right]\,(b\,\mathrm{Sec}[e+f x])^m}{f\,m}$$

Result (type 6, 8760 leaves):

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

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

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

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

$$\left(8\,\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Big/$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\Big(8\,\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big/$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)+\Bigg(8\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\Bigg(\text{AppellF1}\left[1,m,-m,2,\text{Cot}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Cot}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

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

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

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

$$\Big(2\,\mathrm{AppellF1}\Big[1,m,-m,2,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]+m$$

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

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

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

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

$$\Big((-1+m)\Big(-2(-2+m)\,\mathrm{AppellF1}\Big[1-m,-m,1,2-m,\frac{1}{2}\left(1-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right),$$

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

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

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

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

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

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

$$\Big((-1+m)\Big(-2(-2+m)\,\mathrm{AppellF1}\Big[1-m,-m,1,2-m,\frac{1}{2}\left(1-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right),$$

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

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

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

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

$$\Big(4(-2+m)\,\mathrm{Cot}\left[\frac{1}{2}(e+f x)\right]^2\Big(\frac{1}{2(2-m)}(1-m)\,m\,\mathrm{AppellF1}\Big[2-m,1-m,1,$$

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

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

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

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

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

$$\left(8\,\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right.$$

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

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

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

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

$$\Big(4\,(-2+m)\,\text{AppellF1}\Big[1-m,-m,1,2-m,\tfrac{1}{2}\Big(1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big),$$
$$1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big]\,\text{Cot}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big(-1+\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big)$$
$$\Big(\Big(m\,\text{AppellF1}\Big[2-m,1-m,1,3-m,\tfrac{1}{2}\Big(1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big),$$
$$1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big]-2\,\text{AppellF1}\Big[2-m,-m,2,3-m,$$
$$\tfrac{1}{2}\Big(1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big),1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big]\Big)\,\text{Sec}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2$$
$$\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]-2\,(-2+m)\,\Big(\frac{1}{2\,(2-m)}(1-m)\,m\,\text{AppellF1}\Big[2-m,$$
$$1-m,1,3-m,\tfrac{1}{2}\Big(1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big),1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big]$$
$$\text{Sec}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\,\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]-\frac{1}{2-m}(1-m)\,\text{AppellF1}\Big[2-m,$$
$$-m,2,3-m,\tfrac{1}{2}\Big(1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big),1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big]$$
$$\text{Sec}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\,\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]\Big)+\Big(-1+\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big)$$
$$\Big(m\,\Big(-\frac{1}{3-m}(2-m)\,\text{AppellF1}\Big[3-m,1-m,2,4-m,\tfrac{1}{2}\Big(1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big),$$
$$1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big]\,\text{Sec}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\,\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]-\frac{1}{2\,(3-m)}$$
$$(1-m)\,(2-m)\,\text{AppellF1}\Big[3-m,2-m,1,4-m,\tfrac{1}{2}\Big(1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big),$$
$$1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big]\,\text{Sec}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\,\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]\Big)-2$$
$$\Big(\frac{1}{2\,(3-m)}(2-m)\,m\,\text{AppellF1}\Big[3-m,1-m,2,4-m,\tfrac{1}{2}\Big(1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big),$$
$$1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big]\,\text{Sec}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\,\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]-\frac{1}{3-m}$$
$$2\,(2-m)\,\text{AppellF1}\Big[3-m,-m,3,4-m,\tfrac{1}{2}\Big(1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big),$$
$$1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big]\,\text{Sec}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\,\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]\Big)\Big)\Big)\Big)\Big/$$
$$\Big(\Big(-1+m\Big)\,\Big(-2\,(-2+m)\,\text{AppellF1}\Big[1-m,-m,1,2-m,\tfrac{1}{2}\Big(1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big),$$
$$1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big]+\Big(m\,\text{AppellF1}\Big[2-m,1-m,1,3-m,$$
$$\tfrac{1}{2}\Big(1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big),1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big]-$$
$$2\,\text{AppellF1}\Big[2-m,-m,2,3-m,\tfrac{1}{2}\Big(1-\text{Tan}\Big[\tfrac{1}{2}(e+f\,x)\Big]^2\Big),$$

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

Problem 356: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Cot}[e+f x]^5\,(b\,\text{Sec}[e+f x])^m\,dx$$

Optimal (type 5, 40 leaves, 2 steps):

$$-\frac{\text{Hypergeometric2F1}\left[3,\frac{m}{2},\frac{2+m}{2},\text{Sec}[e+f x]^2\right](b\,\text{Sec}[e+f x])^m}{f\,m}$$

Result (type 6, 13654 leaves):

$$\Bigg(\text{Cot}[e+f x]^5\,(b\,\text{Sec}[e+f x])^m$$

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

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

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

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

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

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

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

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

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

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

$$\left(32\,\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{5+m}\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^5\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^{-1+m}\right)\Big/$$

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

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

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

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

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

$$\left(16\,(-2+m)\,\text{AppellF1}\left[1-m,-m,1,2-m,\frac{1}{2}\left(1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right),1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Cot}\left[\frac{1}{2}(e+fx)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{4+m}\right.$$

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

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

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

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

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

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

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

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

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

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

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

$$\Bigg(30\,\text{AppellF1}\left[1,\,m,\,-m,\,2,\,\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\text{Cot}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

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

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

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

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

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

$$\left(6\left(-\frac{1}{2}\,m\,\text{AppellF1}\left[2,m,1-m,3,\text{Cot}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Cot}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.\right.$$

$$\text{Cot}\left[\frac{1}{2}(e+fx)\right]\text{Csc}\left[\frac{1}{2}(e+fx)\right]^2-\frac{1}{2}\,m\,\text{AppellF1}\left[2,1+m,-m,3,\right.$$

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

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

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

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

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

$$\left(6\,(5+m)\,\text{AppellF1}\left[1,m,-m,2,\text{Cot}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Cot}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{6+m}$$

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

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

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

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

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

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

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

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

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

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

$$\Bigg(15\,\text{AppellF1}\left[2,m,-m,3,\text{Cot}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Cot}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Csc}\left[\frac{1}{2}(e+f x)\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{5+m}$$

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

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

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

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

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

$$\text{Csc}\left[\frac{1}{2}(e+f x)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{5+m}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$\text{Csc}\left[\frac{1}{2}(e+f x)\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right] \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{6+m}$$

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

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

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

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

$$\Bigg(32\,(-1+m)\,\text{AppellF1}\left[1, m, 1-m, 2, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

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

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

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

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

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

$$\Bigg(160\,\text{AppellF1}\left[1, m, 1-m, 2, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

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

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

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

$$\left(32\,\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{5+m}\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^5\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^{-1+m}\right)\Big/$$

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

$$\left(32\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left(-\frac{1}{2}(1-m)\,\text{AppellF1}\left[2,m,2-m,3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{2}m\,\text{AppellF1}\left[2,1+m,1-m,3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{5+m}\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^5\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^{-1+m}\right)\Big/$$

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

$$\left(32\,(5+m)\,\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]^3\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{6+m}\right.$$

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

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

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

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

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

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

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

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

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

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

$$\Bigg(30\,\text{AppellF1}\left[1,m,-m,2,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\left(6\,(5+m)\,\text{AppellF1}\left[1,m,-m,2,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]^3\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{6+m}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$1+m,\ -m,\ 4,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\Big]\Big)\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\Big)\Big)+$$

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

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

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

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

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

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

$$1+m,\ -m,\ 4,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\Big]\Bigg)\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\Bigg)\Bigg)+$$

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

$$\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^5\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2}\right)^{6+m}$$

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

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

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

$$1+m,\ -m,\ 4,\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\Big]\Bigg)\ \mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\Bigg)\Bigg)+$$

$$\Bigg(6\,\mathrm{AppellF1}\left[1,\ m,\ -m,\ 2,\ \mathrm{Cot}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\ -\mathrm{Cot}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]$$

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

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

$$\mathrm{Cot}\left[\frac{1}{2}\left(e+f\,x\right)\right]\mathrm{Csc}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2-\frac{4}{3}\,m\,\mathrm{AppellF1}\Big[3,\ 1+m,\ 1-m,\ 4,$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$1+m,\ -m,\ 4,\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]\Big)\ \mathrm{Sec}\left[\frac{1}{2}\ (e+f\,x)\right]^2\ \mathrm{Tan}\Big[$$

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

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

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

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

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

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

$$\mathrm{Sec}\left[\frac{1}{2}\ (e+f\,x)\right]^2\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]+\frac{3}{4}\ (1+m)\ \mathrm{AppellF1}\Big[4,\ 2+m,\ -m,\ 5,$$

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

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

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

$$1+m,\ -m,\ 4,\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2,\ -\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]\Big)\ \mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big)^2\Big)-$$

$$\Big(16\ (-2+m)\ m\ \mathrm{AppellF1}\Big[1-m,\ -m,\ 1,\ 2-m,\ \frac{1}{2}\ \left(1-\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right),\ 1-\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]$$

$$\mathrm{Csc}\left[\frac{1}{2}\ (e+f\,x)\right]\ \mathrm{Sec}\left[\frac{1}{2}\ (e+f\,x)\right]\ \left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2}\right)^{4+m}$$

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

$$\Big((1-m)\ \Big(-2\ (-2+m)\ \mathrm{AppellF1}\Big[1-m,\ -m,\ 1,\ 2-m,\ \frac{1}{2}\ \left(1-\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right),$$

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

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

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

$$\Big(80\ (-2+m)\ \mathrm{AppellF1}\Big[1-m,\ -m,\ 1,\ 2-m,\ \frac{1}{2}\ \left(1-\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right),\ 1-\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\Big]$$

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

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

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

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

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

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

$$\left(16 \left(-2+m\right) \text{AppellF1}\left[1-m, -m, 1, 2-m, \frac{1}{2}\left(1-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right), 1-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\right.$$

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

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

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

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

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

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

$$\left(16 \left(-2+m\right) \text{Cot}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \left(\frac{1}{2\left(2-m\right)}\left(1-m\right) m \text{AppellF1}\left[2-m, 1-m, 1, 3-m,\right.\right.\right.$$

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

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

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

$$\left.\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2}\right)^{4+m} \left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^5 \left(1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^m\right) \Big/$$

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

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

$$\Big(16(-2+m)(4+m)\,\text{AppellF1}\Big[1-m,-m,1,2-m,\frac{1}{2}\left(1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right),$$
$$1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\text{Csc}\left[\frac{1}{2}(e+f x)\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]$$
$$\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{5+m}\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^5\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^m\Big)\Big/$$
$$\Big((1-m)\Big(-2(-2+m)\,\text{AppellF1}\Big[1-m,-m,1,2-m,\frac{1}{2}\left(1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right),$$
$$1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]+\Big(m\,\text{AppellF1}\Big[2-m,1-m,1,3-m,\frac{1}{2}\left(1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right),$$
$$1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]-2\,\text{AppellF1}\Big[2-m,-m,2,3-m,\frac{1}{2}$$
$$\left(1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right),1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Big)\Big)-$$

$$\Big(32\,\text{AppellF1}\Big[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2$$
$$\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{5+m}\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^5\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{-1+m}$$
$$\Big(\Big(\Big((-1+m)\,\text{AppellF1}\Big[2,m,2-m,3,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]+$$
$$m\,\text{AppellF1}\Big[2,1+m,1-m,3,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)$$
$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+2\Big(-\frac{1}{2}(1-m)\,\text{AppellF1}\Big[2,m,2-m,3,$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$
$$\frac{1}{2}m\,\text{AppellF1}\Big[2,1+m,1-m,3,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]$$
$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big)+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2$$
$$\Big((-1+m)\Big(-\frac{2}{3}(2-m)\,\text{AppellF1}\Big[3,m,3-m,4,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]$$
$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{2}{3}m\,\text{AppellF1}\Big[3,1+m,2-m,4,$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Big)+$$

$$m\left(-\frac{2}{3}(1-m)\,\text{AppellF1}\left[3,1+m,2-m,4,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$
$$\frac{2}{3}(1+m)\,\text{AppellF1}\left[3,2+m,1-m,4,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\right)\Big/$$
$$\left(2\,\text{AppellF1}\left[1,m,1-m,2,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$\left(\left((-1+m)\,\text{AppellF1}\left[2,m,2-m,3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+m\,\text{AppellF1}\left[\right.\right.\right.$$
$$\left.\left.\left.2,1+m,1-m,3,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2+$$
$$\left(16(-2+m)\,\text{AppellF1}\left[1-m,-m,1,2-m,\frac{1}{2}\left(1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right),1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$
$$\text{Cot}\left[\frac{1}{2}(e+fx)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{4+m}$$
$$\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^5\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m$$
$$\left(\left(m\,\text{AppellF1}\left[2-m,1-m,1,3-m,\frac{1}{2}\left(1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right),1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]-\right.\right.$$
$$\left.2\,\text{AppellF1}\left[2-m,-m,2,3-m,\frac{1}{2}\left(1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right),1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]-2(-2+m)$$
$$\left(\frac{1}{2(2-m)}(1-m)\,m\,\text{AppellF1}\left[2-m,1-m,1,3-m,\frac{1}{2}\left(1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right),1-\right.\right.$$
$$\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]-\frac{1}{2-m}(1-m)$$
$$\text{AppellF1}\left[2-m,-m,2,3-m,\frac{1}{2}\left(1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right),1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$
$$\left.\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)$$
$$\left(m\left(-\frac{1}{3-m}(2-m)\,\text{AppellF1}\left[3-m,1-m,2,4-m,\frac{1}{2}\left(1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right),\right.\right.\right.$$
$$\left.1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]-\frac{1}{2(3-m)}$$
$$(1-m)(2-m)\,\text{AppellF1}\left[3-m,2-m,1,4-m,\frac{1}{2}\left(1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right),\right.$$

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

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

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

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

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

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

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

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

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

Problem 357: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int (b\ \text{Sec}[e+f\,x])^m\ \text{Tan}[e+f\,x]^4\, dx$$

Optimal (type 5, 63 leaves, 1 step):

$$\frac{1}{5\,f}\left(\text{Cos}[e+f\,x]^2\right)^{\frac{5+m}{2}}\ \text{Hypergeometric2F1}\left[\frac{5}{2},\ \frac{5+m}{2},\ \frac{7}{2},\ \text{Sin}[e+f\,x]^2\right]\ (b\ \text{Sec}[e+f\,x])^m\ \text{Tan}[e+f\,x]^5$$

Result (type 6, 12 350 leaves):

$$\Big((b\ \text{Sec}[e+f\,x])^m$$

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

$$\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{-4+m}\Big(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)^{-1+m}\Big)\Big/\Big(16\ \Big(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)^4$$

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

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

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

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

$$\left(\frac{1}{1-\text{Tan}\big[\frac{1}{2}\ (e+f\,x)\big]^2}\right)^{-3+m}\Big(1+\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big)^m\Big)\Big/\ \Big(16\ \Big(-1+\text{Tan}\Big[\frac{1}{2}\ (e+f\,x)\Big]^2\Big)^4$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-4+m}$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{-2+m}\right) \Big/ \left(16\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^4\right.$$

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

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

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

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

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-4+m}$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{-1+m}\right) \Big/ \left(4\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^5\right.$$

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

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

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

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

$$\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{-4+m}\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{-1+m}\Bigg)\Bigg/\left(32\,\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^4\right.$$

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

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

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

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

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

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

$$\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2}\right)^{-4+m}\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{-1+m}\Bigg)\Bigg/\left(16\,\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^4\right.$$

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

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

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

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

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

$$\left(1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^{-1+m}\Bigg)\Bigg/\left(16\,\left(-1+\text{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right)^4\right.$$

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

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

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

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

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

$$\left(1+\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^{-1+m}\Big)\Big/\ \Big(16\ \left(-1+\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^4$$

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

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

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

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

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

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

$$\left(1+\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^{m}\Big)\Big/\ \Big(4\ \left(-1+\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^5$$

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

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

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

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

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

$$\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2}\right)^{-3+m}\ \left(1+\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^{m}\Big)\Big/\ \Big(32\ \left(-1+\mathrm{Tan}\left[\frac{1}{2}\ (e+f\,x)\right]^2\right)^4$$

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

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

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

$$\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-3+m}\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m\Bigg)\Bigg/\left(16\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4\right.$$

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

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

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m\Bigg)\Bigg/\left(16\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4\right.$$

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

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

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

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^{-1+m}\right)\Bigg/\left(8\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4\right.$$

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^{m}\right)\Bigg/\left(16\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4\right.$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{m}\Bigg)\Bigg/\Bigg(8\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^4$$

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

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

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

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

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

$$\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]+\frac{1}{3}\,(3+m)\,\text{AppellF1}\Big[\frac{3}{2},\,4+m,\,-m,\,\frac{5}{2},$$

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

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

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

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

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

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

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

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

$$\Big(1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)^m\Bigg)\Bigg/\Bigg(4\,\Big(-1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)^4$$

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

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

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

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

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

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

$$\Big(1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)^{-1+m}\Bigg)\Bigg/\Bigg(2\,\Big(-1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)^4$$

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

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

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

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

$$\left(2\,\text{AppellF1}\left[\frac{1}{2}, 4+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^m$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m\right) \Big/ \left(\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^5\right.$$

$$\left(\text{AppellF1}\left[\frac{1}{2}, 4+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] +\right.$$

$$\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2}, 4+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] +\right.$$

$$(4+m)\,\text{AppellF1}\left[\frac{3}{2}, 5+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right) +$$

$$\left(\text{AppellF1}\left[\frac{1}{2}, 4+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^m$$

$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m\right) \Big/ \left(4\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4\right.$$

$$\left(\text{AppellF1}\left[\frac{1}{2}, 4+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] +\right.$$

$$\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2}, 4+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] +\right.$$

$$(4+m)\,\text{AppellF1}\left[\frac{3}{2}, 5+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right) +$$

$$\left(\text{Tan}\left[\frac{1}{2}(e+fx)\right]\left(\frac{1}{3}m\,\text{AppellF1}\left[\frac{3}{2}, 4+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.\right.$$

$$\mathrm{Sec}\left[\frac{1}{2}\,(e+f x)\right]^2 \mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]+\frac{1}{3}\,(4+m)\,\mathrm{AppellF1}\left[\frac{3}{2},5+m,-m,\frac{5}{2},\right.$$
$$\left.\left.\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right]\mathrm{Sec}\left[\frac{1}{2}\,(e+f x)\right]^2 \mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]\right)$$
$$\left(\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2}\right)^m\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right)^m\right)\Big/\left(2\left(-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right)^4\right.$$
$$\left(\mathrm{AppellF1}\left[\frac{1}{2},4+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right]+\right.$$
$$\frac{2}{3}\left(m\,\mathrm{AppellF1}\left[\frac{3}{2},4+m,1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right]+\right.$$
$$(4+m)\,\mathrm{AppellF1}\left[\frac{3}{2},5+m,-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2,\right.$$
$$\left.\left.\left.\left.-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right]\right)\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right)\right)+$$
$$\left(m\,\mathrm{AppellF1}\left[\frac{1}{2},4+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right]\right.$$
$$\mathrm{Sec}\left[\frac{1}{2}\,(e+f x)\right]^2 \mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2}\right)^{1+m}$$
$$\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right)^m\right)\Big/\left(2\left(-1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right)^4\right.$$
$$\left(\mathrm{AppellF1}\left[\frac{1}{2},4+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right]+\right.$$
$$\frac{2}{3}\left(m\,\mathrm{AppellF1}\left[\frac{3}{2},4+m,1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right]+\right.$$
$$(4+m)\,\mathrm{AppellF1}\left[\frac{3}{2},5+m,-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2,\right.$$
$$\left.\left.\left.\left.-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right]\right)\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right)\right)-$$
$$\left(3\,\mathrm{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right]\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]\right.$$
$$\left(\frac{1}{1-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2}\right)^{-4+m}\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right)^{-1+m}$$
$$\left(2\left((-1+m)\,\mathrm{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right]+\right.\right.$$
$$\left.m\,\mathrm{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]^2\right]\right)$$
$$\mathrm{Sec}\left[\frac{1}{2}\,(e+f x)\right]^2 \mathrm{Tan}\left[\frac{1}{2}\,(e+f x)\right]+$$

$$3\left(-\frac{1}{3}(1-m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3}m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+$$

$$2\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\left((-1+m)\left(-\frac{3}{5}(2-m)\,\text{AppellF1}\left[\frac{5}{2},m,3-m,\frac{7}{2},\right.\right.\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$

$$\frac{3}{5}m\,\text{AppellF1}\left[\frac{5}{2},1+m,2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\left.\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)+m\left(-\frac{3}{5}(1-m)\,\text{AppellF1}\left[\frac{5}{2},1+m,\right.\right.$$

$$\left.2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{3}{5}(1+m)\,\text{AppellF1}\left[\frac{5}{2},2+m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\right)\Big/$$

$$\left(16\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\right.\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\right.$$

$$\left.\left.\left.\left.\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right)-$$

$$\left(\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right.$$

$$\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{-3+m}\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m$$

$$\left(\frac{1}{3}m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3}(1+m)\,\text{AppellF1}\left[\frac{3}{2},2+m,-m,\frac{5}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$

$$\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$

$$\left.(1+m)\,\text{AppellF1}\left[\frac{3}{2},2+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{2}{3}\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\left(m\left(-\frac{3}{5}(1-m)\,\text{AppellF1}\left[\frac{5}{2},1+m,2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{3}{5}(1+m)\,\text{AppellF1}\left[\frac{5}{2},2+m,1-m,\frac{7}{2},\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$

$$(1+m)\left(\frac{3}{5}m\,\text{AppellF1}\left[\frac{5}{2},2+m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$

$$\frac{3}{5}(2+m)\,\text{AppellF1}\left[\frac{5}{2},3+m,-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\left.\left.\left.\left.\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\Bigg/\left(16\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^4\right.$$

$$\left(\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2},\right.\right.\right.$$

$$1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+(1+m)\,\text{AppellF1}\left[\frac{3}{2},$$

$$\left.\left.\left.\left.2+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right)-$$

$$\left(\text{AppellF1}\left[\frac{1}{2},2+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right.$$

$$\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-2+m}\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^m$$

$$\left(\frac{1}{3}m\,\text{AppellF1}\left[\frac{3}{2},2+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{3}(2+m)\,\text{AppellF1}\left[\frac{3}{2},3+m,-m,\frac{5}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$

$$\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2},2+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$

$$\left.(2+m)\,\text{AppellF1}\left[\frac{3}{2},3+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{2}{3}\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\left(m\left(-\frac{3}{5}(1-m)\,\text{AppellF1}\left[\frac{5}{2},2+m,2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{3}{5}(2+m)\,\text{AppellF1}\left[\frac{5}{2},3+m,1-m,\frac{7}{2},\right.$$

$$\text{Tan}[\tfrac{1}{2}(e+fx)]^2,\ -\text{Tan}[\tfrac{1}{2}(e+fx)]^2]\ \text{Sec}[\tfrac{1}{2}(e+fx)]^2\ \text{Tan}[\tfrac{1}{2}(e+fx)]\Big)+$$

$$(2+m)\ \Big(\frac{3}{5}\,m\,\text{AppellF1}[\tfrac{5}{2},\ 3+m,\ 1-m,\ \tfrac{7}{2},\ \text{Tan}[\tfrac{1}{2}(e+fx)]^2,$$

$$-\text{Tan}[\tfrac{1}{2}(e+fx)]^2]\ \text{Sec}[\tfrac{1}{2}(e+fx)]^2\ \text{Tan}[\tfrac{1}{2}(e+fx)]+$$

$$\frac{3}{5}(3+m)\ \text{AppellF1}[\tfrac{5}{2},\ 4+m,\ -m,\ \tfrac{7}{2},\ \text{Tan}[\tfrac{1}{2}(e+fx)]^2,\ -\text{Tan}[\tfrac{1}{2}(e+fx)]^2]$$

$$\text{Sec}[\tfrac{1}{2}(e+fx)]^2\ \text{Tan}[\tfrac{1}{2}(e+fx)]\Big)\Big)\Big)\Big)\Big/\Big(8\,\big(-1+\text{Tan}[\tfrac{1}{2}(e+fx)]^2\big)^4$$

$$\Big(\text{AppellF1}[\tfrac{1}{2},\ 2+m,\ -m,\ \tfrac{3}{2},\ \text{Tan}[\tfrac{1}{2}(e+fx)]^2,\ -\text{Tan}[\tfrac{1}{2}(e+fx)]^2]+\frac{2}{3}\Big(m\,\text{AppellF1}[\tfrac{3}{2},$$

$$2+m,\ 1-m,\ \tfrac{5}{2},\ \text{Tan}[\tfrac{1}{2}(e+fx)]^2,\ -\text{Tan}[\tfrac{1}{2}(e+fx)]^2]+(2+m)\ \text{AppellF1}[\tfrac{3}{2},$$

$$3+m,\ -m,\ \tfrac{5}{2},\ \text{Tan}[\tfrac{1}{2}(e+fx)]^2,\ -\text{Tan}[\tfrac{1}{2}(e+fx)]^2]\Big)\ \text{Tan}[\tfrac{1}{2}(e+fx)]^2\Big)^2\Big)+$$

$$\Big(3\,\text{AppellF1}[\tfrac{1}{2},\ 3+m,\ -m,\ \tfrac{3}{2},\ \text{Tan}[\tfrac{1}{2}(e+fx)]^2,\ -\text{Tan}[\tfrac{1}{2}(e+fx)]^2]$$

$$\text{Tan}[\tfrac{1}{2}(e+fx)]\ \left(\frac{1}{1-\text{Tan}[\frac{1}{2}(e+fx)]^2}\right)^{-1+m}\ \big(1+\text{Tan}[\tfrac{1}{2}(e+fx)]^2\big)^m$$

$$\Big(\frac{1}{3}\,m\,\text{AppellF1}[\tfrac{3}{2},\ 3+m,\ 1-m,\ \tfrac{5}{2},\ \text{Tan}[\tfrac{1}{2}(e+fx)]^2,\ -\text{Tan}[\tfrac{1}{2}(e+fx)]^2]$$

$$\text{Sec}[\tfrac{1}{2}(e+fx)]^2\ \text{Tan}[\tfrac{1}{2}(e+fx)]+\frac{1}{3}(3+m)\ \text{AppellF1}[\tfrac{3}{2},\ 4+m,\ -m,\ \tfrac{5}{2},$$

$$\text{Tan}[\tfrac{1}{2}(e+fx)]^2,\ -\text{Tan}[\tfrac{1}{2}(e+fx)]^2]\ \text{Sec}[\tfrac{1}{2}(e+fx)]^2\ \text{Tan}[\tfrac{1}{2}(e+fx)]+$$

$$\frac{2}{3}\Big(m\,\text{AppellF1}[\tfrac{3}{2},\ 3+m,\ 1-m,\ \tfrac{5}{2},\ \text{Tan}[\tfrac{1}{2}(e+fx)]^2,\ -\text{Tan}[\tfrac{1}{2}(e+fx)]^2]+$$

$$(3+m)\ \text{AppellF1}[\tfrac{3}{2},\ 4+m,\ -m,\ \tfrac{5}{2},\ \text{Tan}[\tfrac{1}{2}(e+fx)]^2,\ -\text{Tan}[\tfrac{1}{2}(e+fx)]^2]\Big)$$

$$\text{Sec}[\tfrac{1}{2}(e+fx)]^2\ \text{Tan}[\tfrac{1}{2}(e+fx)]+\frac{2}{3}\,\text{Tan}[\tfrac{1}{2}(e+fx)]^2$$

$$\Big(m\,\Big(-\frac{3}{5}(1-m)\ \text{AppellF1}[\tfrac{5}{2},\ 3+m,\ 2-m,\ \tfrac{7}{2},\ \text{Tan}[\tfrac{1}{2}(e+fx)]^2,\ -\text{Tan}[\tfrac{1}{2}(e+fx)]^2]$$

$$\text{Sec}[\tfrac{1}{2}(e+fx)]^2\ \text{Tan}[\tfrac{1}{2}(e+fx)]+\frac{3}{5}(3+m)\ \text{AppellF1}[\tfrac{5}{2},\ 4+m,\ 1-m,\ \tfrac{7}{2},$$

$$\text{Tan}[\tfrac{1}{2}(e+fx)]^2,\ -\text{Tan}[\tfrac{1}{2}(e+fx)]^2]\ \text{Sec}[\tfrac{1}{2}(e+fx)]^2\ \text{Tan}[\tfrac{1}{2}(e+fx)]\Big)+$$

$$(3+m)\ \Big(\frac{3}{5}\,m\,\text{AppellF1}[\tfrac{5}{2},\ 4+m,\ 1-m,\ \tfrac{7}{2},\ \text{Tan}[\tfrac{1}{2}(e+fx)]^2,$$

$$-\text{Tan}[\tfrac{1}{2}(e+fx)]^2]\ \text{Sec}[\tfrac{1}{2}(e+fx)]^2\ \text{Tan}[\tfrac{1}{2}(e+fx)]+$$

$$\frac{3}{5}(4+m)\,\text{AppellF1}\left[\frac{5}{2},5+m,-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Bigg(4\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4\Bigg(\text{AppellF1}\left[\frac{1}{2},3+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\frac{2}{3}\Bigg(m\,\text{AppellF1}\left[\frac{3}{2},3+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+(3+m)\,\text{AppellF1}\left[\frac{3}{2},4+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)^2\Bigg)-$$

$$\Bigg(\text{AppellF1}\left[\frac{1}{2},4+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^m\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m$$

$$\Bigg(\frac{1}{3}m\,\text{AppellF1}\left[\frac{3}{2},4+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3}(4+m)\,\text{AppellF1}\left[\frac{3}{2},5+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$

$$\frac{2}{3}\Bigg(m\,\text{AppellF1}\left[\frac{3}{2},4+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+(4+m)\,\text{AppellF1}\left[\frac{3}{2},5+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg)\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{2}{3}\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2$$

$$\Bigg(m\Bigg(-\frac{3}{5}(1-m)\,\text{AppellF1}\left[\frac{5}{2},4+m,2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{3}{5}(4+m)\,\text{AppellF1}\left[\frac{5}{2},5+m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Bigg)+$$

$$(4+m)\Bigg(\frac{3}{5}m\,\text{AppellF1}\left[\frac{5}{2},5+m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$

$$\frac{3}{5}(5+m)\,\text{AppellF1}\left[\frac{5}{2},6+m,-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\left(2\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4\left(\text{AppellF1}\left[\frac{1}{2},4+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2},4+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+(4+m)\,\text{AppellF1}\left[\frac{3}{2},5+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)\right)$$

Problem 358: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int(b\,\text{Sec}[e+fx])^m\,\text{Tan}[e+fx]^2\,dx$$

Optimal (type 5, 63 leaves, 1 step):

$$\frac{1}{3f}\left(\text{Cos}[e+fx]^2\right)^{\frac{3+m}{2}}\text{Hypergeometric2F1}\left[\frac{3}{2},\frac{3+m}{2},\frac{5}{2},\text{Sin}[e+fx]^2\right](b\,\text{Sec}[e+fx])^m\,\text{Tan}[e+fx]^3$$

Result (type 6, 6726 leaves):

$$\left(2(b\,\text{Sec}[e+fx])^m\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^m\right.$$
$$\left(-\left(\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right)\Big/\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right.\right.\right.$$
$$\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)\right)+$$
$$\left(3\,\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)\Big/$$
$$\left(3\,\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\left(m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.\right.$$
$$(1+m)\,\text{AppellF1}\left[\frac{3}{2},2+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$

$$-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)+$$

$$\left(2\,\mathrm{AppellF1}\left[\frac{1}{2},2+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\Big/$$

$$\Big(\mathrm{AppellF1}\left[\frac{1}{2},2+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$\frac{2}{3}\Big(m\,\mathrm{AppellF1}\left[\frac{3}{2},2+m,1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$(2+m)\,\mathrm{AppellF1}\left[\frac{3}{2},3+m,-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Big)$$

$$\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)\,\mathrm{Tan}[e+f x]^2\Big)\Big/\left(f\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right.$$

$$\Bigg(-\frac{1}{\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^3}4\,\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left(\frac{1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{1-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^m$$

$$\Bigg(-\Bigg(\Bigg(3\,\mathrm{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\Bigg)\Big/\Bigg(\left(1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Bigg(3\,\mathrm{AppellF1}\Big[\frac{1}{2},m,1-m,$$

$$\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]+2\Big((-1+m)\,\mathrm{AppellF1}\Big[\frac{3}{2},m,$$

$$2-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]+m\,\mathrm{AppellF1}\Big[\frac{3}{2},1+m,$$

$$1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)\Bigg)+$$

$$\Bigg(3\,\mathrm{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\left(-1+\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Bigg)\Big/\Bigg(3\,\mathrm{AppellF1}\Big[\frac{1}{2},1+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

$$-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]+2\Big(m\,\mathrm{AppellF1}\Big[\frac{3}{2},1+m,1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

$$-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]+(1+m)\,\mathrm{AppellF1}\Big[\frac{3}{2},2+m,-m,\frac{5}{2},$$

$$\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)+$$

$$\left(2\,\mathrm{AppellF1}\left[\frac{1}{2},2+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\Big/$$

$$\Big(\mathrm{AppellF1}\left[\frac{1}{2},2+m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$\frac{2}{3}\Big(m\,\mathrm{AppellF1}\left[\frac{3}{2},2+m,1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+$$

$$(2+m)\,\mathrm{AppellF1}\Big[\frac{3}{2},3+m,-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

$$-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)\Big)+$$

$$\frac{1}{\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2}\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^m$$
$$\left(-\left(\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.\right.\right.$$
$$\left.\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right)\Big/\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\right.\right.\right.$$
$$\left.\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(\left(-1+m\right)\text{AppellF1}\left[\frac{3}{2},m,\right.\right.$$
$$\left.2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,\right.$$
$$\left.\left.\left.\left.1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\right)+$$
$$\left(3\,\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$
$$\left.\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\Big/$$
$$\left(3\,\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(m\,\text{AppellF1}\left[\right.\right.\right.$$
$$\left.\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\left(1+m\right)\text{AppellF1}\left[\right.$$
$$\left.\left.\left.\frac{3}{2},2+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)+$$
$$\left(2\,\text{AppellF1}\left[\frac{1}{2},2+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\Big/$$
$$\left(\text{AppellF1}\left[\frac{1}{2},2+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2},2+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$\left(2+m\right)\text{AppellF1}\left[\frac{3}{2},3+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+$$
$$\frac{1}{\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2}2\,m\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{-1+m}$$
$$\left(\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}+\right.$$
$$\left.\frac{\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)}{\left(1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2}\right)$$
$$\left(-\left(\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.\right.\right.$$

$$\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\Bigg)\Bigg/\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\Bigg)+$$

$$\left(3\,\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\Bigg/$$

$$\left(3\,\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+(1+m)\,\text{AppellF1}\left[\frac{3}{2},2+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)+$$

$$\left(2\,\text{AppellF1}\left[\frac{1}{2},2+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\Bigg/$$

$$\left(\text{AppellF1}\left[\frac{1}{2},2+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\frac{2}{3}\left(m\,\text{AppellF1}\left[\frac{3}{2},2+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+(2+m)\,\text{AppellF1}\left[\frac{3}{2},3+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Bigg)+$$

$$\frac{1}{\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2}\,2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(\frac{1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^m$$

$$\Bigg(\Bigg(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\Bigg)\Bigg/$$

$$\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)-$$

$$\Bigg(6\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Sec}[\tfrac{1}{2}(e+f x)]^2\,\text{Tan}[\tfrac{1}{2}(e+f x)]\,(-1+\text{Tan}[\tfrac{1}{2}(e+f x)]^2))\Big/$$

$$((1+\text{Tan}[\tfrac{1}{2}(e+f x)]^2)\,(3\,\text{AppellF1}[\tfrac{1}{2},m,1-m,\tfrac{3}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,$$

$$-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]+2\,((-1+m)\,\text{AppellF1}[\tfrac{3}{2},m,2-m,\tfrac{5}{2},$$

$$\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]+m\,\text{AppellF1}[\tfrac{3}{2},1+m,1-m,$$

$$\tfrac{5}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2])\,\text{Tan}[\tfrac{1}{2}(e+f x)]^2))-$$

$$(3\,(-\tfrac{1}{3}(1-m)\,\text{AppellF1}[\tfrac{3}{2},m,2-m,\tfrac{5}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]$$

$$\text{Sec}[\tfrac{1}{2}(e+f x)]^2\,\text{Tan}[\tfrac{1}{2}(e+f x)]+\tfrac{1}{3}m\,\text{AppellF1}[\tfrac{3}{2},1+m,1-m,\tfrac{5}{2},$$

$$\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]\,\text{Sec}[\tfrac{1}{2}(e+f x)]^2\,\text{Tan}[\tfrac{1}{2}(e+f x)])$$

$$(-1+\text{Tan}[\tfrac{1}{2}(e+f x)]^2)^2)\Big/((1+\text{Tan}[\tfrac{1}{2}(e+f x)]^2)\,(3\,\text{AppellF1}[\tfrac{1}{2},m,$$

$$1-m,\tfrac{3}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]+2\,((-1+m)\,\text{AppellF1}[\tfrac{3}{2},m,$$

$$2-m,\tfrac{5}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]+m\,\text{AppellF1}[\tfrac{3}{2},1+m,$$

$$1-m,\tfrac{5}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2])\,\text{Tan}[\tfrac{1}{2}(e+f x)]^2))+$$

$$(3\,\text{AppellF1}[\tfrac{1}{2},1+m,-m,\tfrac{3}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]$$

$$\text{Sec}[\tfrac{1}{2}(e+f x)]^2\,\text{Tan}[\tfrac{1}{2}(e+f x)])\Big/$$

$$(3\,\text{AppellF1}[\tfrac{1}{2},1+m,-m,\tfrac{3}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]+$$

$$2\,(m\,\text{AppellF1}[\tfrac{3}{2},1+m,1-m,\tfrac{5}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]+(1+m)$$

$$\text{AppellF1}[\tfrac{3}{2},2+m,-m,\tfrac{5}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2])$$

$$\text{Tan}[\tfrac{1}{2}(e+f x)]^2)+(3\,(\tfrac{1}{3}m\,\text{AppellF1}[\tfrac{3}{2},1+m,1-m,\tfrac{5}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,$$

$$-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]\,\text{Sec}[\tfrac{1}{2}(e+f x)]^2\,\text{Tan}[\tfrac{1}{2}(e+f x)]+$$

$$\tfrac{1}{3}(1+m)\,\text{AppellF1}[\tfrac{3}{2},2+m,-m,\tfrac{5}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]$$

$$\text{Sec}[\tfrac{1}{2}(e+f x)]^2\,\text{Tan}[\tfrac{1}{2}(e+f x)])\,(-1+\text{Tan}[\tfrac{1}{2}(e+f x)]^2))\Big/$$

$$(3\,\text{AppellF1}[\tfrac{1}{2},1+m,-m,\tfrac{3}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]+$$

$$2\,(m\,\text{AppellF1}[\tfrac{3}{2},1+m,1-m,\tfrac{5}{2},\text{Tan}[\tfrac{1}{2}(e+f x)]^2,-\text{Tan}[\tfrac{1}{2}(e+f x)]^2]+$$

$$\left(1+m\right) \text{AppellF1}\left[\frac{3}{2}, 2+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\right.$$

$$\left.\left.-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right) +$$

$$\left(2\left(\frac{1}{3} m \text{AppellF1}\left[\frac{3}{2}, 2+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\right.\right.$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right] + \frac{1}{3}\left(2+m\right) \text{AppellF1}\left[\frac{3}{2}, 3+m, -m, \frac{5}{2},\right.$$

$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] \text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\right) \Big/$$

$$\left(\text{AppellF1}\left[\frac{1}{2}, 2+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] +\right.$$

$$\frac{2}{3}\left(m \text{AppellF1}\left[\frac{3}{2}, 2+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] + \left(2+m\right)\right.$$

$$\left.\text{AppellF1}\left[\frac{3}{2}, 3+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\right)$$

$$\left.\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right) + \left(3 \text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] \left(-1+\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right)^2$$

$$\left(2\left(\left(-1+m\right) \text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] +\right.\right.$$

$$\left.m \text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]\right)$$

$$\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right] + 3\left(-\frac{1}{3}\left(1-m\right) \text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2},\right.\right.$$

$$\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] \text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right] +$$

$$\frac{1}{3} m \text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]$$

$$\left.\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right) + 2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2$$

$$\left(\left(-1+m\right)\left(-\frac{3}{5}\left(2-m\right) \text{AppellF1}\left[\frac{5}{2}, m, 3-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\right.\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] \text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right] +$$

$$\frac{3}{5} m \text{AppellF1}\left[\frac{5}{2}, 1+m, 2-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right]$$

$$\left.\text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right) + m\left(-\frac{3}{5}\left(1-m\right) \text{AppellF1}\left[\frac{5}{2}, 1+m,\right.\right.$$

$$2-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] \text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\right.$$

$$\left.\frac{1}{2}\left(e+f x\right)\right] + \frac{3}{5}\left(1+m\right) \text{AppellF1}\left[\frac{5}{2}, 2+m, 1-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2,\right.$$

$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]^2\right] \text{Sec}\left[\frac{1}{2}\left(e+f x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(e+f x\right)\right]\right)\right)\right)\right)\right) \Big/$$

$$\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2\right)-\left(3\,\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\left(2\left(m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+(1+m)\,\text{AppellF1}\left[\frac{3}{2},2+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+3\left(\frac{1}{3}m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{3}(1+m)\,\text{AppellF1}\left[\frac{3}{2},2+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left(m\left(-\frac{3}{5}(1-m)\,\text{AppellF1}\left[\frac{5}{2},1+m,2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{3}{5}(1+m)\,\text{AppellF1}\left[\frac{5}{2},2+m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+(1+m)\left(\frac{3}{5}m\,\text{AppellF1}\left[\frac{5}{2},2+m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{3}{5}(2+m)\,\text{AppellF1}\left[\frac{5}{2},3+m,-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\Big/\left(3\,\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left(m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+(1+m)\,\text{AppellF1}\left[\frac{3}{2},2+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2-\left(2\,\text{AppellF1}\left[\frac{1}{2},2+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\begin{aligned}
&\Bigg(\frac{1}{3}\,m\,\text{AppellF1}\Big[\frac{3}{2},\,2+m,\,1-m,\,\frac{5}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\\
&\quad\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]+\frac{1}{3}\,(2+m)\,\text{AppellF1}\Big[\frac{3}{2},\,3+m,\,-m,\,\frac{5}{2},\\
&\quad\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]+\\
&\quad\frac{2}{3}\,\Big(m\,\text{AppellF1}\Big[\frac{3}{2},\,2+m,\,1-m,\,\frac{5}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+\\
&\quad\quad(2+m)\,\text{AppellF1}\Big[\frac{3}{2},\,3+m,\,-m,\,\frac{5}{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)\\
&\quad\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]+\frac{2}{3}\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\\
&\quad\Big(m\,\Big(-\frac{3}{5}\,(1-m)\,\text{AppellF1}\Big[\frac{5}{2},\,2+m,\,2-m,\,\frac{7}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\\
&\quad\quad-\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{3}{5}\,(2+m)\\
&\quad\quad\text{AppellF1}\Big[\frac{5}{2},\,3+m,\,1-m,\,\frac{7}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\\
&\quad\quad\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)+(2+m)\,\Big(\frac{3}{5}\,m\,\text{AppellF1}\Big[\frac{5}{2},\,3+m,\\
&\quad\quad1-m,\,\frac{7}{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\\
&\quad\quad\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]+\frac{3}{5}\,(3+m)\,\text{AppellF1}\Big[\frac{5}{2},\,4+m,\,-m,\,\frac{7}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\\
&\quad\quad-\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)\Bigg)\Bigg)\Bigg/\\
&\Bigg(\text{AppellF1}\Big[\frac{1}{2},\,2+m,\,-m,\,\frac{3}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+\\
&\quad\frac{2}{3}\,\Big(m\,\text{AppellF1}\Big[\frac{3}{2},\,2+m,\,1-m,\,\frac{5}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+\\
&\quad\quad(2+m)\,\text{AppellF1}\Big[\frac{3}{2},\,3+m,\,-m,\,\frac{5}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\\
&\quad\quad-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Big)\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Bigg)^2\Bigg)\Bigg)
\end{aligned}$$

Problem 359: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Cot}[e+f\,x]^2\,(b\,\text{Sec}[e+f\,x])^m\,dx$$

Optimal (type 5, 59 leaves, 1 step):

$$-\frac{1}{f}\left(\text{Cos}[e+f x]^2\right)^{\frac{1}{2}(-1+m)} \text{Cot}[e+f x] \text{Hypergeometric2F1}\left[-\frac{1}{2}, \frac{1}{2}(-1+m), \frac{1}{2}, \text{Sin}[e+f x]^2\right] (b \text{Sec}[e+f x])^m$$

Result (type 6, 6766 leaves):

$$\left(\text{Cot}\left[\frac{1}{2}(e+f x)\right] \text{Cot}[e+f x]^2 (b \text{Sec}[e+f x])^m \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{2+m} \left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2 \left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^m \left(-\left(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{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{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2 m \left(\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right) + 3 \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2 \left(-\left(\left(4 \text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \right/ \left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right) \left(3 \text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2 \left((-1+m) \text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + m \text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\right) + \text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \Big/ \left(3 \text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2 m \left(\text{AppellF1}\left[\frac{3}{2}, m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \text{AppellF1}\left[\frac{3}{2}, 1+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\right) \Big/$$

$$\left(2 f \left(\frac{1}{2} m \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{2+m} \left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2 \left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^{-1+m} \left(-\left(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right/\right.\right.\right.$$

$$\left(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2m\right.$$
$$\left(\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \text{AppellF1}\left[\frac{1}{2},\right.\right.$$
$$\left.\left.\left. 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right) +$$
$$3\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2 \left(-\left(\left(4\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.\right.\right.$$
$$\left.\left. -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \Big/ \left(\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right) \left(3\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2},\right.\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2}, m, 2-m,\right.\right.$$
$$\frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m,\right.$$
$$\left.\left.\left.\left.\left.\frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)\right) +$$
$$\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \Big/$$
$$\left(3\,\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2m\right.$$
$$\left(\text{AppellF1}\left[\frac{3}{2}, m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \text{AppellF1}\left[\frac{3}{2},\right.\right.$$
$$\left.\left.\left.\left. 1+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)\right) +$$
$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{2+m} \left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)$$
$$\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m$$
$$\left(-\left(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \Big/\right.\right.$$
$$\left(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2m\right.$$
$$\left(\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \text{AppellF1}\left[\frac{1}{2},\right.\right.$$
$$\left.\left.\left. 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right) +$$
$$3\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2 \left(-\left(\left(4\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.\right.\right.$$
$$\left.\left. -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \Big/ \left(\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right) \left(3\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2},\right.\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2}, m, 2-m,\right.\right.$$
$$\frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m,\right.$$
$$\left.\left.\left.\left.\left.\frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)\right) +$$

$$\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \Big/ \left(3\,\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2\,m \left(\text{AppellF1}\left[\frac{3}{2}, m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \text{AppellF1}\left[\frac{3}{2}, 1+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Bigg)\Bigg) -$$

$$\frac{1}{4}\,\text{Csc}\left[\frac{1}{2}(e+fx)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{2+m} \left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2 \left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m$$

$$\Bigg(-\Bigg(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \Big/ \left(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2\,m \left(\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Bigg) +$$

$$3\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2 \Bigg(-\Bigg(\Bigg(4\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Bigg) \Big/ \Bigg(\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right) \Bigg(3\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Bigg)\Bigg)\Bigg) +$$

$$\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \Big/ \left(3\,\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2\,m \left(\text{AppellF1}\left[\frac{3}{2}, m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \text{AppellF1}\left[\frac{3}{2}, 1+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Bigg)\Bigg) +$$

$$\frac{1}{2}(2+m)\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{3+m} \left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2 \left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m$$

$$\Bigg(-\Bigg(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] \Big/$$

$$\left(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2 m \left(\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right) +$$

$$3 \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2 \left(-\left(\left(4 \text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \Big/ \left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right) \left(3 \text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2 \left((-1+m) \text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + m \text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\right) +$$

$$\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \Big/ \left(3 \text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2 m \left(\text{AppellF1}\left[\frac{3}{2}, m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \text{AppellF1}\left[\frac{3}{2}, 1+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\right) +$$

$$\frac{1}{2} \text{Cot}\left[\frac{1}{2}(e+f x)\right] \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{2+m} \left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2 \left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^m$$

$$\left(-\left(\left(-m \text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right] - m \text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\right) \Big/ \right.\right.$$

$$\left(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2 m \left(\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right) +$$

$$\left(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \left(-m \text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.\right.$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]-m\,\text{AppellF1}\Big[\frac{1}{2},1+m,-m,\frac{3}{2},$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$

$$2m\Big(\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$\text{AppellF1}\left[\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big)$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+2m\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2$$

$$\Big(-\frac{1}{3}(1-m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{2}{3}m\,\text{AppellF1}\Big[\frac{3}{2},1+m,1-m,\frac{5}{2},$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]+$$

$$\frac{1}{3}(1+m)\,\text{AppellF1}\Big[\frac{3}{2},2+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)\Big)\Big)\Big)\Big/$$

$$\Big(\text{AppellF1}\left[-\frac{1}{2},m,-m,\frac{1}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+$$

$$2m\Big(\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\text{AppellF1}\Big[$$

$$\frac{1}{2},1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)^2+$$

$$3\,\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\Big(-\Big(\Big(4\,\text{AppellF1}\Big[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\Big/\Big(\Big(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big(3\,\text{AppellF1}\Big[\frac{1}{2},m,1-m,\frac{3}{2},$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+2\Big((-1+m)\,\text{AppellF1}\Big[\frac{3}{2},m,2-m,$$

$$\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+m\,\text{AppellF1}\Big[\frac{3}{2},1+m,1-m,$$

$$\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big)\Big)+$$

$$\text{AppellF1}\left[\frac{1}{2},m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big/$$

$$\Big(3\,\text{AppellF1}\left[\frac{1}{2},m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2m$$

$$\Big(\text{AppellF1}\left[\frac{3}{2},m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\text{AppellF1}\Big[\frac{3}{2},$$

$$1+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big)+$$

$$3\,\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big(\Big(4\,\text{AppellF1}\Big[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$

$$-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)\Big/$$

$$\Big(\Big(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)^2\Big(3\,\mathrm{AppellF1}\Big[\frac{1}{2},m,1-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$
$$-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+2\Big((-1+m)\,\mathrm{AppellF1}\Big[\frac{3}{2},m,2-m,\frac{5}{2},$$
$$\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+m\,\mathrm{AppellF1}\Big[\frac{3}{2},1+m,1-m,$$
$$\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big)-$$

$$\Big(4\Big(-\frac{1}{3}(1-m)\,\mathrm{AppellF1}\Big[\frac{3}{2},m,2-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]$$
$$\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3}m\,\mathrm{AppellF1}\Big[\frac{3}{2},1+m,1-m,\frac{5}{2},\mathrm{Tan}\Big[$$
$$\frac{1}{2}(e+fx)\Big]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)\Big)\Big/$$

$$\Big(\Big(1+\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big(3\,\mathrm{AppellF1}\Big[\frac{1}{2},m,1-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,$$
$$-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+2\Big((-1+m)\,\mathrm{AppellF1}\Big[\frac{3}{2},m,2-m,\frac{5}{2},$$
$$\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+m\,\mathrm{AppellF1}\Big[\frac{3}{2},1+m,1-m,$$
$$\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)\Big)+$$

$$\Big(\frac{1}{3}m\,\mathrm{AppellF1}\Big[\frac{3}{2},m,1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]$$
$$\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]+\frac{1}{3}m\,\mathrm{AppellF1}\Big[\frac{3}{2},1+m,-m,\frac{5}{2},$$
$$\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]\Big)\Big/$$

$$\Big(3\,\mathrm{AppellF1}\Big[\frac{1}{2},m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+2m$$
$$\Big(\mathrm{AppellF1}\Big[\frac{3}{2},m,1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+\mathrm{AppellF1}\Big[\frac{3}{2},$$
$$1+m,-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big)-$$

$$\Big(\mathrm{AppellF1}\Big[\frac{1}{2},m,-m,\frac{3}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]$$
$$\Big(2m\Big(\mathrm{AppellF1}\Big[\frac{3}{2},m,1-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+$$
$$\mathrm{AppellF1}\Big[\frac{3}{2},1+m,-m,\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\Big)$$
$$\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]+3\Big(\frac{1}{3}m\,\mathrm{AppellF1}\Big[\frac{3}{2},m,1-m,$$
$$\frac{5}{2},\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]\mathrm{Sec}\left[\frac{1}{2}(e+fx)\right]^2$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{3} m \,\text{AppellF1}\left[\frac{3}{2}, 1+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)+$$

$$2 m \,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2 \Bigg(-\frac{3}{5}(1-m) \,\text{AppellF1}\left[\frac{5}{2}, m, 2-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{6}{5} m \,\text{AppellF1}\left[\frac{5}{2}, 1+m, 1-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{3}{5}(1+m) \,\text{AppellF1}\left[\frac{5}{2}, 2+m, -m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\Bigg(3 \,\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2 m \Bigg(\text{AppellF1}\left[\frac{3}{2}, m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\text{AppellF1}\left[\frac{3}{2}, 1+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)^2+$$

$$\Bigg(4 \,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\Bigg(2 \Bigg((-1+m) \,\text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+m \,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg)$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+3 \Bigg(-\frac{1}{3}(1-m) \,\text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{3} m \,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)+$$

$$2 \,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2 \Bigg((-1+m) \Bigg(-\frac{3}{5}(2-m) \,\text{AppellF1}\left[\frac{5}{2}, m, 3-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{3}{5} m \,\text{AppellF1}\left[\frac{5}{2}, 1+m, 2-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)+$$

$$m \Bigg(-\frac{3}{5}(1-m) \,\text{AppellF1}\left[\frac{5}{2}, 1+m, 2-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$

$$\frac{3}{5}(1+m)\,\text{AppellF1}\left[\frac{5}{2},2+m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.$$
$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+fx)\right]^2\text{Tan}\left[\frac{1}{2}(e+fx)\right]\right)\right)\right)\right)\Big/$$
$$\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.\right.$$
$$-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\Big]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\right.$$
$$\left.\left.\left.\left.\left.\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^2\right)\right)\right)\right)$$

Problem 360: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Cot}[e+fx]^4\,(b\,\text{Sec}[e+fx])^m\,dx$$

Optimal (type 5, 63 leaves, 1 step):

$$-\frac{1}{3f}\left(\text{Cos}[e+fx]^2\right)^{\frac{1}{2}(-3+m)}\text{Cot}[e+fx]^3$$
$$\text{Hypergeometric2F1}\left[-\frac{3}{2},\frac{1}{2}(-3+m),-\frac{1}{2},\text{Sin}[e+fx]^2\right](b\,\text{Sec}[e+fx])^m$$

Result (type 6, 11 071 leaves):

$$\left(\text{Cot}\left[\frac{1}{2}(e+fx)\right]^3\text{Cot}[e+fx]^4\,(b\,\text{Sec}[e+fx])^m\right.$$
$$\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{4+m}\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m$$
$$\left(-\left(\text{AppellF1}\left[-\frac{3}{2},m,-m,-\frac{1}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big/\right.\right.$$
$$\left(\text{AppellF1}\left[-\frac{3}{2},m,-m,-\frac{1}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]-\right.$$
$$2m\left(\text{AppellF1}\left[-\frac{1}{2},m,1-m,\frac{1}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\text{AppellF1}\left[-\frac{1}{2},\right.\right.$$
$$\left.\left.\left.1+m,-m,\frac{1}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)+$$
$$\left(15\,\text{AppellF1}\left[-\frac{1}{2},m,-m,\frac{1}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Big/$$
$$\left(\text{AppellF1}\left[-\frac{1}{2},m,-m,\frac{1}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$

$$2\,m\,\Bigl(\text{AppellF1}\bigl[\tfrac{1}{2},m,1-m,\tfrac{3}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]+\text{AppellF1}\bigl[\tfrac{1}{2},$$
$$1+m,-m,\tfrac{3}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]\Bigr)\,\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\Bigr)+$$
$$\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^4\,\Bigl(\Bigl(144\,\text{AppellF1}\bigl[\tfrac{1}{2},m,1-m,\tfrac{3}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]\Bigr)\Big/$$
$$\Bigl(\Bigl(1+\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\Bigr)\,\Bigl(3\,\text{AppellF1}\bigl[\tfrac{1}{2},m,1-m,\tfrac{3}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,$$
$$-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]+2\,\Bigl((-1+m)\,\text{AppellF1}\bigl[\tfrac{3}{2},m,2-m,\tfrac{5}{2},$$
$$\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]+m\,\text{AppellF1}\bigl[\tfrac{3}{2},1+m,1-m,$$
$$\tfrac{5}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]\Bigr)\,\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\Bigr)\Bigr)-$$
$$\Bigl(45\,\text{AppellF1}\bigl[\tfrac{1}{2},m,-m,\tfrac{3}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]\Bigr)\Big/$$
$$\Bigl(3\,\text{AppellF1}\bigl[\tfrac{1}{2},m,-m,\tfrac{3}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]+$$
$$2\,m\,\Bigl(\text{AppellF1}\bigl[\tfrac{3}{2},m,1-m,\tfrac{5}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]+\text{AppellF1}\bigl[\tfrac{3}{2},$$
$$1+m,-m,\tfrac{5}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]\Bigr)\,\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\Bigr)+$$
$$\Bigl(5\,\text{AppellF1}\bigl[\tfrac{3}{2},m,-m,\tfrac{5}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]\,\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\Bigr)\Big/$$
$$\Bigl(5\,\text{AppellF1}\bigl[\tfrac{3}{2},m,-m,\tfrac{5}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]+$$
$$2\,m\,\Bigl(\text{AppellF1}\bigl[\tfrac{5}{2},m,1-m,\tfrac{7}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]+\text{AppellF1}\bigl[\tfrac{5}{2},$$
$$1+m,-m,\tfrac{7}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]\Bigr)\,\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\Bigr)\Bigr)\Bigr)\Bigr)\Big/$$
$$\Bigl(24\,f\,\Bigl(\frac{1}{24}\,m\,\text{Csc}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\,\left(\frac{1}{1-\text{Tan}\bigl[\frac{1}{2}(e+f\,x)\bigr]^2}\right)^{4+m}\,\Bigl(-1+\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\Bigr)^4$$
$$\Bigl(1+\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\Bigr)^{-1+m}$$
$$\Bigl(-\Bigl(\text{AppellF1}\bigl[-\tfrac{3}{2},m,-m,-\tfrac{1}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]\Big/$$
$$\Bigl(\text{AppellF1}\bigl[-\tfrac{3}{2},m,-m,-\tfrac{1}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]-2\,m\,\Bigl(\text{AppellF1}\bigl[$$
$$-\tfrac{1}{2},m,1-m,\tfrac{1}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]+\text{AppellF1}\bigl[-\tfrac{1}{2},$$
$$1+m,-m,\tfrac{1}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]\Bigr)\,\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\Bigr)\Bigr)+$$
$$\Bigl(15\,\text{AppellF1}\bigl[-\tfrac{1}{2},m,-m,\tfrac{1}{2},\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2,-\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\bigr]\,\text{Tan}\bigl[\tfrac{1}{2}(e+f\,x)\bigr]^2\Bigr)\Big/$$

$$\left(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2m\left(\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right) +$$

$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^4\left(\left(144\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\Big/\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\left(3\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right) -$$

$$\left(45\,\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\Big/\left(3\,\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2m\left(\text{AppellF1}\left[\frac{3}{2}, m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \text{AppellF1}\left[\frac{3}{2}, 1+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right) +$$

$$\left(5\,\text{AppellF1}\left[\frac{3}{2}, m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Big/\left(5\,\text{AppellF1}\left[\frac{3}{2}, m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + 2m\left(\text{AppellF1}\left[\frac{5}{2}, m, 1-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \text{AppellF1}\left[\frac{5}{2}, 1+m, -m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)\right) +$$

$$\frac{1}{6}\text{Csc}\left[\frac{1}{2}(e+fx)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{4+m}\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^3 \left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m$$

$$\left(-\left(\text{AppellF1}\left[-\frac{3}{2}, m, -m, -\frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big/\left(\text{AppellF1}\left[-\frac{3}{2}, m, -m, -\frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] - 2m\left(\text{AppellF1}\left[-\frac{1}{2}, m, 1-m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right] + \text{AppellF1}\left[-\frac{1}{2}, 1+m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+fx)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right) +$$

$$\left(15\,\text{AppellF1}\left[-\frac{1}{2},m,-m,\frac{1}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Big/$$
$$\left(\text{AppellF1}\left[-\frac{1}{2},m,-m,\frac{1}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\right.$$
$$2m\left(\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\text{AppellF1}\left[\frac{1}{2},\right.\right.$$
$$\left.\left.\left.1+m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)+$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^4\left(\left(144\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,\right.\right.\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\Big/\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\right.\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\right.\right.$$
$$\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\right.$$
$$\left.\left.\left.\left.\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)-$$
$$\left(45\,\text{AppellF1}\left[\frac{1}{2},m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\Big/$$
$$\left(3\,\text{AppellF1}\left[\frac{1}{2},m,-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2m\right.$$
$$\left(\text{AppellF1}\left[\frac{3}{2},m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\text{AppellF1}\left[\frac{3}{2},\right.\right.$$
$$\left.\left.\left.1+m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)+$$
$$\left(5\,\text{AppellF1}\left[\frac{3}{2},m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right.$$
$$\left.\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\Big/$$
$$\left(5\,\text{AppellF1}\left[\frac{3}{2},m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+2m\right.$$
$$\left(\text{AppellF1}\left[\frac{5}{2},m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]+\text{AppellF1}\left[\frac{5}{2},\right.\right.$$
$$\left.\left.\left.\left.1+m,-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)\right)\right)-$$
$$\frac{1}{16}\text{Cot}\left[\frac{1}{2}(e+fx)\right]^2\text{Csc}\left[\frac{1}{2}(e+fx)\right]^2\left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2}\right)^{4+m}$$
$$\left(-1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^4$$
$$\left(1+\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right)^m$$
$$\left(-\left(\text{AppellF1}\left[-\frac{3}{2},m,-m,-\frac{1}{2},\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+fx)\right]^2\right]\Big/\right.\right.$$

$$\left(\text{AppellF1}\left[-\frac{3}{2}, m, -m, -\frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] - 2 m \left(\text{AppellF1}\left[-\frac{1}{2}, m, 1-m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \text{AppellF1}\left[-\frac{1}{2}, 1+m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\Big) +$$

$$\left(15\,\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right) \Big/ \left(\text{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2 m \left(\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right) +$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^4 \Bigg(\Bigg(144\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg) \Big/ \Bigg(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right) \Bigg(3\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2 \Bigg((-1+m)\,\text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg) -$$

$$\left(45\,\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \Big/ \Bigg(3\,\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2 m \left(\text{AppellF1}\left[\frac{3}{2}, m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \text{AppellF1}\left[\frac{3}{2}, 1+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg) +$$

$$\left(5\,\text{AppellF1}\left[\frac{3}{2}, m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right) \Big/ \Bigg(5\,\text{AppellF1}\left[\frac{3}{2}, m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2 m \left(\text{AppellF1}\left[\frac{5}{2}, m, 1-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \text{AppellF1}\left[\frac{5}{2}, 1+m, -m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)\Bigg) +$$

$$\frac{1}{24}(4+m)\,\text{Csc}\left[\frac{1}{2}(e+f x)\right]^2 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{5+m} \left(-1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^4 \left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^m$$

$$\Bigg(-\Bigg(\text{AppellF1}\Big[-\frac{3}{2}, m, -m, -\frac{1}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big]\Big/$$

$$\Bigg(\text{AppellF1}\Big[-\frac{3}{2}, m, -m, -\frac{1}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big] - 2 m \Bigg(\text{AppellF1}\Big[$$

$$-\frac{1}{2}, m, 1-m, \frac{1}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big] + \text{AppellF1}\Big[-\frac{1}{2},$$

$$1+m, -m, \frac{1}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big]\Bigg) \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Bigg)\Bigg) +$$

$$\Bigg(15\,\text{AppellF1}\Big[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big] \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Bigg)\Big/$$

$$\Bigg(\text{AppellF1}\Big[-\frac{1}{2}, m, -m, \frac{1}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big] +$$

$$2 m \Bigg(\text{AppellF1}\Big[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big] + \text{AppellF1}\Big[\frac{1}{2},$$

$$1+m, -m, \frac{3}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big]\Bigg) \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Bigg) +$$

$$\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^4 \Bigg(\Bigg(144\,\text{AppellF1}\Big[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big]\Bigg)\Big/\Bigg(\Bigg(1+\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Bigg) \Bigg(3\,\text{AppellF1}\Big[\frac{1}{2}, m, 1-m, \frac{3}{2},$$

$$\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big] + 2\Bigg((-1+m)\,\text{AppellF1}\Big[\frac{3}{2}, m, 2-m,$$

$$\frac{5}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big] + m\,\text{AppellF1}\Big[\frac{3}{2}, 1+m, 1-m,$$

$$\frac{5}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big]\Bigg) \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Bigg)\Bigg) -$$

$$\Bigg(45\,\text{AppellF1}\Big[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big]\Bigg)\Big/$$

$$\Bigg(3\,\text{AppellF1}\Big[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big] + 2 m$$

$$\Bigg(\text{AppellF1}\Big[\frac{3}{2}, m, 1-m, \frac{5}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big] + \text{AppellF1}\Big[\frac{3}{2},$$

$$1+m, -m, \frac{5}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big]\Bigg) \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Bigg) +$$

$$\Bigg(5\,\text{AppellF1}\Big[\frac{3}{2}, m, -m, \frac{5}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big]$$

$$\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Bigg)\Big/$$

$$\Bigg(5\,\text{AppellF1}\Big[\frac{3}{2}, m, -m, \frac{5}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big] + 2 m$$

$$\Bigg(\text{AppellF1}\Big[\frac{5}{2}, m, 1-m, \frac{7}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big] + \text{AppellF1}\Big[\frac{5}{2},$$

$$1+m, -m, \frac{7}{2}, \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2, -\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Big]\Bigg) \text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Bigg)\Bigg)\Bigg) +$$

$$\frac{1}{24} \text{Cot}\Big[\frac{1}{2}(e+f x)\Big]^3 \left(\frac{1}{1-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2}\right)^{4+m} \Bigg(-1+\text{Tan}\Big[\frac{1}{2}(e+f x)\Big]^2\Bigg)^4$$

$$\left(1+\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^m$$
$$\left(-\left(\left(3 m \operatorname{AppellF1}\left[-\frac{1}{2}, m, 1-m, \frac{1}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.\right.\right.$$
$$\operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]+3 m \operatorname{AppellF1}\left[-\frac{1}{2}, 1+m, -m, \frac{1}{2},\right.$$
$$\left.\left.\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right) \Big/$$
$$\left(\operatorname{AppellF1}\left[-\frac{3}{2}, m, -m, -\frac{1}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-2 m\left(\operatorname{AppellF1}\left[\right.\right.\right.$$
$$-\frac{1}{2}, m, 1-m, \frac{1}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\operatorname{AppellF1}\left[-\frac{1}{2},\right.$$
$$\left.\left.\left.1+m, -m, \frac{1}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)+$$
$$\left(15 \operatorname{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$
$$\left.\operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right) \Big/$$
$$\left(\operatorname{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$2 m\left(\operatorname{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\operatorname{AppellF1}\left[\frac{1}{2},\right.\right.$$
$$\left.\left.\left.1+m, -m, \frac{3}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)+$$
$$\left(15 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left(-m \operatorname{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.\right.\right.$$
$$-\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]-m \operatorname{AppellF1}\left[\frac{1}{2}, 1+m, -m,\right.$$
$$\left.\left.\left.\frac{3}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right) \Big/$$
$$\left(\operatorname{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.$$
$$2 m\left(\operatorname{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\operatorname{AppellF1}\left[\frac{1}{2},\right.\right.$$
$$\left.\left.\left.1+m, -m, \frac{3}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right) \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)+$$
$$\left(\operatorname{AppellF1}\left[-\frac{3}{2}, m, -m, -\frac{1}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$
$$\left(3 m \operatorname{AppellF1}\left[-\frac{1}{2}, m, 1-m, \frac{1}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$
$$\operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]+3 m \operatorname{AppellF1}\left[-\frac{1}{2}, 1+m, -m, \frac{1}{2},\right.$$
$$\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] \operatorname{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]-$$
$$2 m\left(\operatorname{AppellF1}\left[-\frac{1}{2}, m, 1-m, \frac{1}{2}, \operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\operatorname{AppellF1}\left[\right.\right.$$

$$-\frac{1}{2}, 1+m, -m, \frac{1}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\Big)\,\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right] - 2\,m\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left(\left(1-m\right)\mathrm{AppellF1}\left[\frac{1}{2}, m, 2-m, \frac{3}{2},\right.\right.$$

$$\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right] -$$

$$2\,m\,\mathrm{AppellF1}\left[\frac{1}{2}, 1+m, 1-m, \frac{3}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right] - \left(1+m\right)\mathrm{AppellF1}\left[\frac{1}{2}, 2+m, -m, \frac{3}{2}, \mathrm{Tan}\left[\frac{1}{2}\right.\right.$$

$$\left.\left.\left.\left.(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\Big/$$

$$\left(\mathrm{AppellF1}\left[-\frac{3}{2}, m, -m, -\frac{1}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] - 2\,m\,\left(\mathrm{AppellF1}\Big[\right.\right.$$

$$-\frac{1}{2}, m, 1-m, \frac{1}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big] + \mathrm{AppellF1}\Big[-\frac{1}{2},$$

$$\left.\left.1+m, -m, \frac{1}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\right)\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2 -$$

$$\left(15\,\mathrm{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right.$$

$$\left(-m\,\mathrm{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right] - m\,\mathrm{AppellF1}\Big[\frac{1}{2}, 1+m, -m, \frac{3}{2},$$

$$\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right] +$$

$$2\,m\,\left(\mathrm{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] +\right.$$

$$\left.\mathrm{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)$$

$$\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right] + 2\,m\,\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2$$

$$\left(-\frac{1}{3}\left(1-m\right)\mathrm{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right] + \frac{2}{3}\,m\,\mathrm{AppellF1}\Big[\frac{3}{2}, 1+m, 1-m, \frac{5}{2},$$

$$\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right] +$$

$$\frac{1}{3}\left(1+m\right)\mathrm{AppellF1}\Big[\frac{3}{2}, 2+m, -m, \frac{5}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2,$$

$$\left.\left.\left.\left.-\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}(e+f x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\Big/$$

$$\left(\mathrm{AppellF1}\left[-\frac{1}{2}, m, -m, \frac{1}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] +\right.$$

$$2\,m\,\left(\mathrm{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\mathrm{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] +\right.$$

$$\text{AppellF1}\left[\frac{1}{2}, 1+m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big)^2 + 2\,\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2 \text{Tan}\left[\frac{1}{2}(e+f x)\right]^3$$

$$\Bigg(\Bigg(144\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg)\Bigg/$$

$$\Bigg(\Bigg(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg(3\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2\Bigg((-1+m)\,\text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m,\right.$$

$$\left.\frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg) -$$

$$\Bigg(45\,\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg)\Bigg/$$

$$\Bigg(3\,\text{AppellF1}\left[\frac{1}{2}, m, -m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2\,m$$

$$\Bigg(\text{AppellF1}\left[\frac{3}{2}, m, 1-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \text{AppellF1}\left[\frac{3}{2},\right.$$

$$\left.1+m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg) +$$

$$\Bigg(5\,\text{AppellF1}\left[\frac{3}{2}, m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg/$$

$$\Bigg(5\,\text{AppellF1}\left[\frac{3}{2}, m, -m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2\,m$$

$$\Bigg(\text{AppellF1}\left[\frac{5}{2}, m, 1-m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + \text{AppellF1}\left[\frac{5}{2},\right.$$

$$\left.1+m, -m, \frac{7}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg) +$$

$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]^4\Bigg(-\Bigg(\Bigg(144\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\Bigg)\Bigg/$$

$$\Bigg(\Bigg(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)^2\Bigg(3\,\text{AppellF1}\left[\frac{1}{2}, m, 1-m, \frac{3}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + 2\Bigg((-1+m)\,\text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right] + m\,\text{AppellF1}\left[\frac{3}{2}, 1+m, 1-m,\right.$$

$$\left.\frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Bigg)\Bigg)\Bigg) +$$

$$\Bigg(144\left(-\frac{1}{3}(1-m)\,\text{AppellF1}\left[\frac{3}{2}, m, 2-m, \frac{5}{2}, \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2, -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$

$$\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]+\frac{1}{3}\,m\,\text{AppellF1}\Big[\frac{3}{2},\,1+m,\,1-m,\,\frac{5}{2},\,\text{Tan}\Big[$$

$$\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big)\Big/$$

$$\Big(\Big(1+\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)\,\Big(3\,\text{AppellF1}\Big[\frac{1}{2},\,m,\,1-m,\,\frac{3}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+2\,\Big((-1+m)\,\text{AppellF1}\Big[\frac{3}{2},\,m,\,2-m,\,\frac{5}{2},$$

$$\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+m\,\text{AppellF1}\Big[\frac{3}{2},\,1+m,\,1-m,$$

$$\frac{5}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Big)\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)\Big)-$$

$$\Big(45\,\Big(\frac{1}{3}\,m\,\text{AppellF1}\Big[\frac{3}{2},\,m,\,1-m,\,\frac{5}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]$$

$$\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]+\frac{1}{3}\,m\,\text{AppellF1}\Big[\frac{3}{2},\,1+m,\,-m,\,\frac{5}{2},\,\text{Tan}\Big[$$

$$\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big)\Big/$$

$$\Big(3\,\text{AppellF1}\Big[\frac{1}{2},\,m,\,-m,\,\frac{3}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+2\,m$$

$$\Big(\text{AppellF1}\Big[\frac{3}{2},\,m,\,1-m,\,\frac{5}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+\text{AppellF1}\Big[\frac{3}{2},$$

$$1+m,\,-m,\,\frac{5}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Big)\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)+$$

$$\Big(5\,\text{AppellF1}\Big[\frac{3}{2},\,m,\,-m,\,\frac{5}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]$$

$$\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big/$$

$$\Big(5\,\text{AppellF1}\Big[\frac{3}{2},\,m,\,-m,\,\frac{5}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+2\,m$$

$$\Big(\text{AppellF1}\Big[\frac{5}{2},\,m,\,1-m,\,\frac{7}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+\text{AppellF1}\Big[\frac{5}{2},$$

$$1+m,\,-m,\,\frac{7}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\Big)\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big)+$$

$$\Big(5\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\Big(\frac{3}{5}\,m\,\text{AppellF1}\Big[\frac{5}{2},\,m,\,1-m,\,\frac{7}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]\,\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]+$$

$$\frac{3}{5}\,m\,\text{AppellF1}\Big[\frac{5}{2},\,1+m,\,-m,\,\frac{7}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]$$

$$\text{Sec}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]\Big)\Big)\Big/$$

$$\Big(5\,\text{AppellF1}\Big[\frac{3}{2},\,m,\,-m,\,\frac{5}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+2\,m$$

$$\Big(\text{AppellF1}\Big[\frac{5}{2},\,m,\,1-m,\,\frac{7}{2},\,\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\text{Tan}\Big[\frac{1}{2}\,(e+f\,x)\Big]^2\Big]+\text{AppellF1}\Big[\frac{5}{2},$$

$$1+m,\,-m,\,\frac{7}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Big)\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)+$$

$$\Big(45\,\mathrm{AppellF1}\left[\frac{1}{2},\,m,\,-m,\,\frac{3}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\Big(2\,m\,\Big(\mathrm{AppellF1}\left[\frac{3}{2},\,m,\,1-m,\,\frac{5}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$\mathrm{AppellF1}\left[\frac{3}{2},\,1+m,\,-m,\,\frac{5}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\Big)$$

$$\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+3\,\Big(\frac{1}{3}\,m\,\mathrm{AppellF1}\Big[\frac{3}{2},\,m,\,1-m,$$

$$\frac{5}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2$$

$$\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+\frac{1}{3}\,m\,\mathrm{AppellF1}\Big[\frac{3}{2},\,1+m,\,-m,\,\frac{5}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

$$-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)+$$

$$2\,m\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\Big(-\frac{3}{5}\,(1-m)\,\mathrm{AppellF1}\Big[\frac{5}{2},\,m,\,2-m,\,\frac{7}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

$$-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+\frac{6}{5}\,m\,\mathrm{AppellF1}\Big[\frac{5}{2},$$

$$1+m,\,1-m,\,\frac{7}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2$$

$$\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+\frac{3}{5}\,(1+m)\,\mathrm{AppellF1}\Big[\frac{5}{2},\,2+m,\,-m,\,\frac{7}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,$$

$$-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)\Big)\Big)\Big/$$

$$\Big(3\,\mathrm{AppellF1}\left[\frac{1}{2},\,m,\,-m,\,\frac{3}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+2\,m\,\Big(\mathrm{AppellF1}\Big[$$

$$\frac{3}{2},\,m,\,1-m,\,\frac{5}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]+\mathrm{AppellF1}\Big[\frac{3}{2},$$

$$1+m,\,-m,\,\frac{5}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\Big)\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big)^2-$$

$$\Big(5\,\mathrm{AppellF1}\left[\frac{3}{2},\,m,\,-m,\,\frac{5}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2$$

$$\Big(2\,m\,\Big(\mathrm{AppellF1}\left[\frac{5}{2},\,m,\,1-m,\,\frac{7}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]+$$

$$\mathrm{AppellF1}\left[\frac{5}{2},\,1+m,\,-m,\,\frac{7}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]\Big)$$

$$\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+5\,\Big(\frac{3}{5}\,m\,\mathrm{AppellF1}\Big[\frac{5}{2},\,m,\,1-m,\,\frac{7}{2},\,\mathrm{Tan}\Big[$$

$$\frac{1}{2}\,(e+f\,x)\Big]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]+$$

$$\frac{3}{5}\,m\,\mathrm{AppellF1}\left[\frac{5}{2},\,1+m,\,-m,\,\frac{7}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2\right]$$

$$\mathrm{Sec}\left[\frac{1}{2}\,(e+f\,x)\right]^2\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]\Big)+2\,m\,\mathrm{Tan}\left[\frac{1}{2}\,(e+f\,x)\right]^2$$

$$\left(-\frac{5}{7}\,(1-m)\,\text{AppellF1}\left[\frac{7}{2},m,2-m,\frac{9}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$
$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{10}{7}\,m\,\text{AppellF1}\left[\frac{7}{2},1+m,1-m,\right.$$
$$\left.\frac{9}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{5}{7}\,(1+m)\,\text{AppellF1}\left[\frac{7}{2},2+m,-m,\frac{9}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\Bigg/$$
$$\left(5\,\text{AppellF1}\left[\frac{3}{2},m,-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\,m\left(\text{AppellF1}\left[\right.\right.\right.$$
$$\frac{5}{2},m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\text{AppellF1}\left[\frac{5}{2},$$
$$\left.\left.1+m,-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)^2-$$
$$\left(144\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right.$$
$$\left(2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+\right.\right.$$
$$\left.m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)$$
$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+3\left(-\frac{1}{3}\,(1-m)\,\text{AppellF1}\left[\frac{3}{2},m,\right.\right.$$
$$\left.2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{3}\,m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$
$$2\,\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left((-1+m)\left(-\frac{3}{5}\,(2-m)\,\text{AppellF1}\left[\frac{5}{2},m,3-m,\frac{7}{2},\right.\right.\right.$$
$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2$$
$$\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{3}{5}\,m\,\text{AppellF1}\left[\frac{5}{2},1+m,2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+$$
$$m\left(-\frac{3}{5}\,(1-m)\,\text{AppellF1}\left[\frac{5}{2},1+m,2-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$
$$\frac{3}{5}\,(1+m)\,\text{AppellF1}\left[\frac{5}{2},2+m,1-m,\frac{7}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$
$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\right)\Bigg/$$

$$\left(\left(1+\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\left(3\,\text{AppellF1}\left[\frac{1}{2},m,1-m,\frac{3}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+2\left((-1+m)\,\text{AppellF1}\left[\frac{3}{2},m,2-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+m\,\text{AppellF1}\left[\frac{3}{2},1+m,1-m,\frac{5}{2},\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right)\right)\right)\right)$$

Problem 361: Unable to integrate problem.

$$\int \text{Cot}[e+f x]^6\,(b\,\text{Sec}[e+f x])^m\,dx$$

Optimal (type 5, 63 leaves, 1 step):

$$-\frac{1}{5 f}\left(\text{Cos}[e+f x]^2\right)^{\frac{1}{2}(-5+m)}\text{Cot}[e+f x]^5\,\text{Hypergeometric2F1}\left[-\frac{5}{2},\frac{1}{2}(-5+m),-\frac{3}{2},\text{Sin}[e+f x]^2\right](b\,\text{Sec}[e+f x])^m$$

Result (type 8, 21 leaves):

$$\int \text{Cot}[e+f x]^6\,(b\,\text{Sec}[e+f x])^m\,dx$$

Problem 367: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Cos}[a+b x]^2\,(d\,\text{Tan}[a+b x])^n\,dx$$

Optimal (type 5, 50 leaves, 2 steps):

$$\frac{\text{Hypergeometric2F1}\left[2,\frac{1+n}{2},\frac{3+n}{2},-\text{Tan}[a+b x]^2\right](d\,\text{Tan}[a+b x])^{1+n}}{b\,d\,(1+n)}$$

Result (type 6, 7155 leaves):

$$\left(2^{1+n}(3+n)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(a+b x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2}\right)^n\right.$$
$$\left(\left(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2\right)\Big/\right.$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-\right.$$
$$2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-n\,\text{AppellF1}\left[\right.\right.$$

$$\frac{3+n}{2}, 1+n, 1, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big]\Big) \text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big) -$$

$$\Big(4\,\text{AppellF1}\Big[\frac{1+n}{2}, n, 2, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right)\Big)\Big/$$

$$\Big(\left(3+n\right)\text{AppellF1}\Big[\frac{1+n}{2}, n, 2, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big] +$$

$$2\Big(-2\,\text{AppellF1}\Big[\frac{3+n}{2}, n, 3, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big] + n\,\text{AppellF1}\Big[$$

$$\frac{3+n}{2}, 1+n, 2, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big]\Big) \text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big) +$$

$$\Big(4\,\text{AppellF1}\Big[\frac{1+n}{2}, n, 3, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big]\Big)\Big/$$

$$\Big(\left(3+n\right)\text{AppellF1}\Big[\frac{1+n}{2}, n, 3, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big] +$$

$$2\Big(-3\,\text{AppellF1}\Big[\frac{3+n}{2}, n, 4, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big] + n\,\text{AppellF1}\Big[$$

$$\frac{3+n}{2}, 1+n, 3, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big]\Big) \text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big)\Big)$$

$$\text{Tan}[a+bx]^{-n}\left(d\,\text{Tan}[a+bx]\right)^n \Big(\frac{1}{4}\text{Cos}\left[2(a+bx)\right]^3\text{Tan}[a+bx]^n -$$

$$\frac{1}{4}\,i\,\text{Sin}\left[2(a+bx)\right]\text{Tan}[a+bx]^n +$$

$$\frac{1}{2}\text{Sin}\left[2(a+bx)\right]^2\text{Tan}[a+bx]^n +$$

$$\frac{1}{4}\,i\,\text{Sin}\left[2(a+bx)\right]^3\text{Tan}[a+bx]^n +$$

$$\text{Cos}\left[2(a+bx)\right]^2\left(\frac{1}{2}\text{Tan}[a+bx]^n + \frac{1}{4}\,i\,\text{Sin}\left[2(a+bx)\right]\text{Tan}[a+bx]^n\right) +$$

$$\text{Cos}\left[2(a+bx)\right]\left(\frac{1}{4}\text{Tan}[a+bx]^n + \frac{1}{4}\text{Sin}\left[2(a+bx)\right]^2\text{Tan}[a+bx]^n\right)\Big)\Big)\Big/$$

$$\Big(b\,(1+n)\left(1+\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right)^3$$

$$\Big(-\frac{1}{(1+n)\left(1+\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right)^4}\,3\times 2^{1+n}\,(3+n)\,\text{Sec}\left[\frac{1}{2}(a+bx)\right]^2$$

$$\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(a+bx)\right]}{-1+\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2}\right)^n\Big(\Big(\text{AppellF1}\Big[\frac{1+n}{2}, n, 1, \frac{3+n}{2},$$

$$\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big]\left(1+\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right)^2\Big)\Big/$$

$$\left(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]-\right.$$
$$2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]-\right.$$
$$\left.n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)$$
$$\left.\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)-\left(4\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\right.\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)\right)\Big/\left(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,2,\right.\right.$$
$$\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\right.\right.$$
$$\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,$$
$$\left.\left.2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)+$$
$$\left(4\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)\Big/$$
$$\left(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+\right.$$
$$2\left(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+\right.$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)\right)+$$
$$\frac{1}{\left(1+n\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)^3}2^n\left(3+n\right)\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]}{-1+\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2}\right)^n$$
$$\left(\left(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right.\right.$$
$$\left.\left(1+\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)^2\right)\Big/$$
$$\left(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]-\right.$$
$$2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]-n\right.$$
$$\left.\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)$$
$$\left.\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)-\left(4\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)\right)\Big/$$
$$\left(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+\right.$$

$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+n\right.$$
$$\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\Bigg)+$$
$$\left(4\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+\right.$$
$$2\left(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+n\right.$$
$$\text{AppellF1}\left[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)\right)+$$
$$\frac{1}{(1+n)\left(1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)^3}\,2^{1+n}\,n\,(3+n)\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]$$
$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2}\right)^{-1+n}$$
$$\left(\frac{\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)}\right)$$
$$\left(\left(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right.\right.$$
$$\left.\left(1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)^2\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]-\right.$$
$$2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]-n\right.$$
$$\left.\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)$$
$$\left.\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)-\left(4\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)\Bigg)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+n\right.$$
$$\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)+$$

$$\Big(4\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)\Big/$$

$$\Big(\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$2\Big(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n$$

$$\text{AppellF1}\Big[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)\Big)+$$

$$\frac{1}{(1+n)\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^3}\,2^{1+n}(3+n)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(a+b x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2}\right)^n$$

$$\Big(\Big(2\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)\Big)\Big/$$

$$\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-$$

$$2\Big(\text{AppellF1}\Big[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]-n\,\text{AppellF1}\Big[\frac{3+n}{2},1+n,1,\frac{5+n}{2},$$

$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)+$$

$$\Big(\Big(-\frac{1}{3+n}(1+n)\,\text{AppellF1}\Big[1+\frac{1+n}{2},n,2,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}n(1+n)$$

$$\text{AppellF1}\left[1+\frac{1+n}{2},1+n,1,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Big)\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2\Big)\Big/$$

$$\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-$$

$$2\Big(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-n$$

$$\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)-\Big(4\,\text{AppellF1}\Big[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Big)\Big/$$

$$\left(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+n\right.$$
$$\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)-$$
$$\left(4\left(-\frac{1}{3+n}2\left(1+n\right)\text{AppellF1}\left[1+\frac{1+n}{2},n,3,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\right.\right.\right.$$
$$-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]+\frac{1}{3+n}n\left(1+n\right)$$
$$\text{AppellF1}\left[1+\frac{1+n}{2},1+n,2,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]$$
$$\left.\left.\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]\right)\left(1+\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)\right)\Big/$$
$$\left(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+n\right.$$
$$\left.\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)$$
$$\left.\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)+\left(4\left(-\frac{1}{3+n}3\left(1+n\right)\text{AppellF1}\left[1+\frac{1+n}{2},n,4,1+\frac{3+n}{2},\right.\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]+$$
$$\frac{1}{3+n}n\left(1+n\right)\text{AppellF1}\left[1+\frac{1+n}{2},1+n,3,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]\right)\right)\Big/$$
$$\left(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+\right.$$
$$2\left(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+n\right.$$
$$\left.\text{AppellF1}\left[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)$$
$$\left.\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)-\left(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)^2$$
$$\left(-2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]-\right.\right.$$
$$\left.n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)$$
$$\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]+\left(3+n\right)\left(-\frac{1}{3+n}\left(1+n\right)\text{AppellF1}\left[1+\frac{1+n}{2},\right.\right.$$

$$n,\ 2,\ 1+\frac{3+n}{2},\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (a+b\,x)\right]^2$$

$$\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]+\frac{1}{3+n}n\ (1+n)\ \text{AppellF1}\Big[1+\frac{1+n}{2},\ 1+n,\ 1,\ 1+\frac{3+n}{2},$$

$$\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (a+b\,x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]\Big)-$$

$$2\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\ \Big(-\frac{1}{5+n}2\ (3+n)\ \text{AppellF1}\Big[1+\frac{3+n}{2},\ n,\ 3,\ 1+\frac{5+n}{2},$$

$$\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (a+b\,x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]+$$

$$\frac{1}{5+n}n\ (3+n)\ \text{AppellF1}\Big[1+\frac{3+n}{2},\ 1+n,\ 2,\ 1+\frac{5+n}{2},\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (a+b\,x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]-$$

$$n\ \Big(-\frac{1}{5+n}(3+n)\ \text{AppellF1}\Big[1+\frac{3+n}{2},\ 1+n,\ 2,\ 1+\frac{5+n}{2},\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (a+b\,x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]+\frac{1}{5+n}$$

$$(1+n)\ (3+n)\ \text{AppellF1}\Big[1+\frac{3+n}{2},\ 2+n,\ 1,\ 1+\frac{5+n}{2},\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (a+b\,x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]\Big)\Big)\Big)\Big)\Big/$$

$$\Big(\Big((3+n)\ \text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 1,\ \frac{3+n}{2},\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]-$$

$$2\ \Big(\text{AppellF1}\Big[\frac{3+n}{2},\ n,\ 2,\ \frac{5+n}{2},\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]-$$

$$n\,\text{AppellF1}\Big[\frac{3+n}{2},\ 1+n,\ 1,\ \frac{5+n}{2},\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]\Big)\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big)^2+$$

$$\Big(4\,\text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 2,\ \frac{3+n}{2},\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]$$

$$\Big(1+\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big)\ \Big(2\ \Big(-2\,\text{AppellF1}\Big[\frac{3+n}{2},\ n,\ 3,\ \frac{5+n}{2},\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]+n\,\text{AppellF1}\Big[\frac{3+n}{2},\ 1+n,\ 2,\ \frac{5+n}{2},\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]\Big)\ \text{Sec}\left[\frac{1}{2}\ (a+b\,x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]+$$

$$(3+n)\ \Big(-\frac{1}{3+n}2\ (1+n)\ \text{AppellF1}\Big[1+\frac{1+n}{2},\ n,\ 3,\ 1+\frac{3+n}{2},\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (a+b\,x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]+\frac{1}{3+n}$$

$$n\ (1+n)\ \text{AppellF1}\Big[1+\frac{1+n}{2},\ 1+n,\ 2,\ 1+\frac{3+n}{2},\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2,\ -\text{Tan}\Big[$$

$$\frac{1}{2}\ (a+b\,x)\Big]^2\Big]\ \text{Sec}\left[\frac{1}{2}\ (a+b\,x)\right]^2\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]\Big)+2\ \text{Tan}\left[\frac{1}{2}\ (a+b\,x)\right]^2$$

$$\left(-2\left(-\frac{1}{5+n}3\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},\,n,\,4,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(a+b\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]+\frac{1}{5+n}$$
$$n\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},\,1+n,\,3,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(a+b\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]\right)+$$
$$n\left(-\frac{1}{5+n}2\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},\,1+n,\,3,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(a+b\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]+\frac{1}{5+n}$$
$$(1+n)\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},\,2+n,\,2,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(a+b\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]\right)\right)\right)\right)\Big/$$
$$\left(\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},\,n,\,2,\,\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]+\right.\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},\,n,\,3,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]+\right.$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},\,1+n,\,2,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\right)\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right)^2-$$
$$\left(4\,\text{AppellF1}\left[\frac{1+n}{2},\,n,\,3,\,\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\right.$$
$$\left(2\left(-3\,\text{AppellF1}\left[\frac{3+n}{2},\,n,\,4,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]+\right.\right.$$
$$\left.n\,\text{AppellF1}\left[\frac{3+n}{2},\,1+n,\,3,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\right)$$
$$\text{Sec}\left[\frac{1}{2}\,(a+b\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]+(3+n)\,\left(-\frac{1}{3+n}3\,(1+n)\right.$$
$$\text{AppellF1}\left[1+\frac{1+n}{2},\,n,\,4,\,1+\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}\,(a+b\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]+\frac{1}{3+n}n\,(1+n)\,\text{AppellF1}\left[\right.$$
$$\left.1+\frac{1+n}{2},\,1+n,\,3,\,1+\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]$$
$$\left.\text{Sec}\left[\frac{1}{2}\,(a+b\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]\right)+2\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2$$
$$\left(-3\left(-\frac{1}{5+n}4\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},\,n,\,5,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(a+b\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]+\frac{1}{5+n}$$
$$n\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},\,1+n,\,4,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.$$

$$-\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big]\ \text{Sec}\Big[\frac{1}{2}(a+b x)\Big]^2\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]\Big)+$$

$$n\Big(-\frac{1}{5+n}3\,(3+n)\ \text{AppellF1}\Big[1+\frac{3+n}{2},\ 1+n,\ 4,\ 1+\frac{5+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big]\ \text{Sec}\Big[\frac{1}{2}(a+b x)\Big]^2\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]+\frac{1}{5+n}$$

$$(1+n)\ (3+n)\ \text{AppellF1}\Big[1+\frac{3+n}{2},\ 2+n,\ 3,\ 1+\frac{5+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big]\ \text{Sec}\Big[\frac{1}{2}(a+b x)\Big]^2\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]\Big)\Big)\Big)\Big)\Big/$$

$$\Big(\Big((3+n)\ \text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 3,\ \frac{3+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big]+$$

$$2\Big(-3\,\text{AppellF1}\Big[\frac{3+n}{2},\ n,\ 4,\ \frac{5+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big]+$$

$$n\,\text{AppellF1}\Big[\frac{3+n}{2},\ 1+n,\ 3,\ \frac{5+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big]\Big)\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big)^2\Big)\Big)$$

Problem 368: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Cos}[a+b x]^4\ (d\,\text{Tan}[a+b x])^n\,dx$$

Optimal (type 5, 50 leaves, 2 steps):

$$\frac{\text{Hypergeometric2F1}\Big[3,\ \frac{1+n}{2},\ \frac{3+n}{2},\ -\text{Tan}[a+b x]^2\Big]\ (d\,\text{Tan}[a+b x])^{1+n}}{b\,d\,(1+n)}$$

Result (type 6, 12 351 leaves):

$$\Big(2^{1+n}\ (3+n)\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]\ \Big(-\frac{\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]}{-1+\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2}\Big)^n$$

$$\Big(\Big(\text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 1,\ \frac{3+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big]$$

$$\Big(1+\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big)^4\Big)\Big/$$

$$\Big((3+n)\ \text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 1,\ \frac{3+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big]-$$

$$2\Big(\text{AppellF1}\Big[\frac{3+n}{2},\ n,\ 2,\ \frac{5+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big]-n\,\text{AppellF1}\Big[$$

$$\frac{3+n}{2},\ 1+n,\ 1,\ \frac{5+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big]\Big)\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big)-$$

$$\Big(8\,\text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 2,\ \frac{3+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b x)\Big]^2\Big]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)^3\Bigg)\Bigg/$$

$$\left(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+n\,\text{AppellF1}\left[\right.\right.$$
$$\left.\left.\left.\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)+$$

$$\left(24\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right.$$
$$\left(1+\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)^2\Bigg)\Bigg/$$
$$\left(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+\right.$$
$$2\left(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+n\,\text{AppellF1}\left[\right.\right.$$
$$\left.\left.\left.\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)-$$

$$\left(32\,\text{AppellF1}\left[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right.$$
$$\left(1+\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)\Bigg)\Bigg/$$
$$\left(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+\right.$$
$$2\left(-4\,\text{AppellF1}\left[\frac{3+n}{2},n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+n\,\text{AppellF1}\left[\right.\right.$$
$$\left.\left.\left.\frac{3+n}{2},1+n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)+$$

$$\left(16\,\text{AppellF1}\left[\frac{1+n}{2},n,5,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)\Bigg/$$
$$\left(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,5,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+\right.$$
$$2\left(-5\,\text{AppellF1}\left[\frac{3+n}{2},n,6,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+n\,\text{AppellF1}\left[\right.\right.$$
$$\left.\left.\left.\frac{3+n}{2},1+n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)\Bigg)$$

$$\text{Tan}[a+b\,x]^{-n}\left(d\,\text{Tan}[a+b\,x]\right)^n\left(-\frac{1}{16}\,i\,\text{Sin}\left[4\left(a+b\,x\right)\right]\text{Tan}[a+b\,x]^n+\right.$$
$$\frac{1}{4}\,\text{Sin}\left[2\left(a+b\,x\right)\right]\text{Sin}\left[4\left(a+b\,x\right)\right]\text{Tan}[a+b\,x]^n+$$
$$\frac{3}{8}\,i\,\text{Sin}\left[2\left(a+b\,x\right)\right]^2\text{Sin}\left[4\left(a+b\,x\right)\right]\text{Tan}[a+b\,x]^n-$$
$$\frac{1}{4}\,\text{Sin}\left[2\left(a+b\,x\right)\right]^3\text{Sin}\left[4\left(a+b\,x\right)\right]\text{Tan}[a+b\,x]^n-$$
$$\frac{1}{16}\,i\,\text{Sin}\left[2\left(a+b\,x\right)\right]^4\text{Sin}\left[4\left(a+b\,x\right)\right]\text{Tan}[a+b\,x]^n+$$

$$\text{Cos}[4\,(a+b\,x)]\left(\frac{1}{16}\text{Tan}[a+b\,x]^n+\frac{1}{4}\,\mathrm{i}\,\text{Sin}[2\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n-\frac{3}{8}\text{Sin}[2\,(a+b\,x)]^2\,\text{Tan}[a+b\,x]^n-\frac{1}{4}\,\mathrm{i}\,\text{Sin}[2\,(a+b\,x)]^3\,\text{Tan}[a+b\,x]^n+\frac{1}{16}\text{Sin}[2\,(a+b\,x)]^4\,\text{Tan}[a+b\,x]^n\right)+$$

$$\text{Cos}[2\,(a+b\,x)]^4\left(\frac{1}{16}\text{Cos}[4\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n-\frac{1}{16}\,\mathrm{i}\,\text{Sin}[4\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n\right)+$$

$$\text{Cos}[2\,(a+b\,x)]^3\left(-\frac{1}{4}\,\mathrm{i}\,\text{Sin}[4\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n+\frac{1}{4}\text{Sin}[2\,(a+b\,x)]\,\text{Sin}[4\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n+\text{Cos}[4\,(a+b\,x)]\left(\frac{1}{4}\text{Tan}[a+b\,x]^n+\frac{1}{4}\,\mathrm{i}\,\text{Sin}[2\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n\right)\right)+$$

$$\text{Cos}[2\,(a+b\,x)]^2\left(-\frac{3}{8}\,\mathrm{i}\,\text{Sin}[4\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n+\frac{3}{4}\text{Sin}[2\,(a+b\,x)]\,\text{Sin}[4\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n+\frac{3}{8}\,\mathrm{i}\,\text{Sin}[2\,(a+b\,x)]^2\,\text{Sin}[4\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n+\text{Cos}[4\,(a+b\,x)]\left(\frac{3}{8}\text{Tan}[a+b\,x]^n+\frac{3}{4}\,\mathrm{i}\,\text{Sin}[2\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n-\frac{3}{8}\text{Sin}[2\,(a+b\,x)]^2\,\text{Tan}[a+b\,x]^n\right)\right)+$$

$$\text{Cos}[2\,(a+b\,x)]\left(-\frac{1}{4}\,\mathrm{i}\,\text{Sin}[4\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n+\frac{3}{4}\text{Sin}[2\,(a+b\,x)]\,\text{Sin}[4\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n+\frac{3}{4}\,\mathrm{i}\,\text{Sin}[2\,(a+b\,x)]^2\,\text{Sin}[4\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n-\frac{1}{4}\text{Sin}[2\,(a+b\,x)]^3\,\text{Sin}[4\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n+\text{Cos}[4\,(a+b\,x)]\left(\frac{1}{4}\text{Tan}[a+b\,x]^n+\frac{3}{4}\,\mathrm{i}\,\text{Sin}[2\,(a+b\,x)]\,\text{Tan}[a+b\,x]^n-\frac{3}{4}\text{Sin}[2\,(a+b\,x)]^2\,\text{Tan}[a+b\,x]^n-\frac{1}{4}\,\mathrm{i}\,\text{Sin}[2\,(a+b\,x)]^3\,\text{Tan}[a+b\,x]^n\right)\right)\Bigg)\Bigg/$$

$$\Bigg(b\,(1+n)\left(1+\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right)^5\Bigg(-\frac{1}{(1+n)\left(1+\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right)^6}$$

$$5\times 2^{1+n}\,(3+n)\,\text{Sec}\left[\frac{1}{2}\,(a+b\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2}\right)^n$$

$$\Bigg(\Bigg(\text{AppellF1}\left[\frac{1+n}{2},\,n,\,1,\,\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right)^4\Bigg)\Bigg/\Bigg(\Bigg((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},\,n,\,1,\,\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]-2\left(\text{AppellF1}\left[\frac{3+n}{2},\,n,\,2,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]-n\,\text{AppellF1}\left[\frac{3+n}{2},\,1+n,\,1,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.$$

$$\left.\left.-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\Bigg)-\Bigg(8\,\text{AppellF1}\left[\frac{1+n}{2},\,n,\,2,\,\frac{3+n}{2},\right.$$

$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^3\Big) \Big/$$

$$\Big(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2}, n, 2, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$2\Big(-2\,\text{AppellF1}\left[\frac{3+n}{2}, n, 3, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$n\,\text{AppellF1}\left[\frac{3+n}{2}, 1+n, 2, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)+\Big(24\,\text{AppellF1}\left[\frac{1+n}{2}, n, 3, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2\Big) \Big/$$

$$\Big(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2}, n, 3, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$2\Big(-3\,\text{AppellF1}\left[\frac{3+n}{2}, n, 4, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$n\,\text{AppellF1}\left[\frac{3+n}{2}, 1+n, 3, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)-\Big(32\,\text{AppellF1}\left[\frac{1+n}{2}, n, 4, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)\Big) \Big/ \Big(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2}, n, 4,\right.$$

$$\left.\frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+2\Big(-4\,\text{AppellF1}\left[\frac{3+n}{2}, n, 5,\right.$$

$$\left.\frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n\,\text{AppellF1}\left[\frac{3+n}{2}, 1+n,\right.$$

$$\left.4, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)+$$

$$\Big(16\,\text{AppellF1}\left[\frac{1+n}{2}, n, 5, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big) \Big/$$

$$\Big(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2}, n, 5, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$2\Big(-5\,\text{AppellF1}\left[\frac{3+n}{2}, n, 6, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$n\,\text{AppellF1}\left[\frac{3+n}{2}, 1+n, 5, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)\Big)+$$

$$\frac{1}{\left(1+n\right)\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^5}2^n\left(3+n\right)\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\left(-\frac{\text{Tan}\left[\frac{1}{2}(a+b x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2}\right)^n$$

$$\Bigg(\Big(\text{AppellF1}\left[\frac{1+n}{2}, n, 1, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}(a+b x)\right]^2, -\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^4\Big) \Big/$$

$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]-\right.$$
$$2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]-n\right.$$
$$\left.\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)$$
$$\left.\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)-\left(8\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)^3\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+n\right.$$
$$\left.\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)$$
$$\left.\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)+\left(24\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)^2\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+\right.$$
$$2\left(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+n\right.$$
$$\left.\text{AppellF1}\left[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)$$
$$\left.\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)-\left(32\,\text{AppellF1}\left[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+\right.$$
$$2\left(-4\,\text{AppellF1}\left[\frac{3+n}{2},n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+n\right.$$
$$\text{AppellF1}\left[\frac{3+n}{2},1+n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)+$$
$$\left(16\,\text{AppellF1}\left[\frac{1+n}{2},n,5,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,5,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+\right.$$
$$2\left(-5\,\text{AppellF1}\left[\frac{3+n}{2},n,6,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+n\right.$$
$$\text{AppellF1}\left[\frac{3+n}{2},1+n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)\Big)+$$

$$\frac{1}{(1+n)\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^5}\,2^{1+n}\,n\,(3+n)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(a+b x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2}\right)^{-1+n}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)}\right)$$

$$\Bigg(\Bigg(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^4\Bigg)\Big/$$

$$\Bigg(\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-$$

$$2\Big(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-n$$

$$\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)-\Bigg(8\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^3\Bigg)\Big/$$

$$\Bigg((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$2\Big(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n$$

$$\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Bigg)+\Bigg(24\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2\Bigg)\Big/$$

$$\Bigg((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$2\Big(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n$$

$$\text{AppellF1}\left[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Bigg)-\Bigg(32\,\text{AppellF1}\left[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)\Bigg)\Big/$$

$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.$$
$$2\left(-4\,\text{AppellF1}\left[\frac{3+n}{2},n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n\right.$$
$$\text{AppellF1}\left[\frac{3+n}{2},1+n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)+$$
$$\left(16\,\text{AppellF1}\left[\frac{1+n}{2},n,5,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,5,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.$$
$$2\left(-5\,\text{AppellF1}\left[\frac{3+n}{2},n,6,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n\right.$$
$$\text{AppellF1}\left[\frac{3+n}{2},1+n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)\right)+$$
$$\frac{1}{(1+n)\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^5}2^{1+n}(3+n)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(a+b x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2}\right)^n$$
$$\left(\left(4\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right.\right.$$
$$\left.\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^3\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-\right.$$
$$2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\right.$$
$$\left.\left.\left.\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)+$$
$$\left(\left(-\frac{1}{3+n}(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},n,2,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}n(1+n)$$
$$\text{AppellF1}\left[1+\frac{1+n}{2},1+n,1,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$
$$\left.\left.\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\right)\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^4\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-\right.$$
$$2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-n\right.$$

$$\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)-\Big(24\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2\Big)\Big/$$

$$\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$2\Big(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n$$

$$\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)-$$

$$\Big(8\Big(-\frac{1}{3+n}2(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},n,3,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}n(1+n)$$

$$\text{AppellF1}\left[1+\frac{1+n}{2},1+n,2,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Big)\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^3\Big)\Big/$$

$$\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$2\Big(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n$$

$$\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)+\Big(48\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)\Big)\Big/$$

$$\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$2\Big(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n$$

$$\text{AppellF1}\left[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)+$$

$$\Big(24\Big(-\frac{1}{3+n}3(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},n,4,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}n(1+n)$$

$$\text{AppellF1}\left[1+\frac{1+n}{2},1+n,3,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}\left(a+b x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]\Big) \left(1+\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right)^2\Big) \Big/$$

$$\Big(\left(3+n\right) \text{AppellF1}\left[\frac{1+n}{2}, n, 3, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right] +$$

$$2 \Big(-3 \text{AppellF1}\left[\frac{3+n}{2}, n, 4, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right] + n$$

$$\text{AppellF1}\left[\frac{3+n}{2}, 1+n, 3, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\Big) - \Big(32 \text{AppellF1}\left[\frac{1+n}{2}, n, 4, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right] \text{Sec}\left[\frac{1}{2}\left(a+b x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]\Big) \Big/$$

$$\Big(\left(3+n\right) \text{AppellF1}\left[\frac{1+n}{2}, n, 4, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right] +$$

$$2 \Big(-4 \text{AppellF1}\left[\frac{3+n}{2}, n, 5, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right] + n$$

$$\text{AppellF1}\left[\frac{3+n}{2}, 1+n, 4, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right]\Big) \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\Big) -$$

$$\Big(32 \Big(-\frac{1}{3+n} 4 \left(1+n\right) \text{AppellF1}\left[1+\frac{1+n}{2}, n, 5, 1+\frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right] \text{Sec}\left[\frac{1}{2}\left(a+b x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right] + \frac{1}{3+n} n \left(1+n\right)$$

$$\text{AppellF1}\left[1+\frac{1+n}{2}, 1+n, 4, 1+\frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}\left(a+b x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]\Big) \left(1+\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right)\Big) \Big/$$

$$\Big(\left(3+n\right) \text{AppellF1}\left[\frac{1+n}{2}, n, 4, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right] +$$

$$2 \Big(-4 \text{AppellF1}\left[\frac{3+n}{2}, n, 5, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right] + n$$

$$\text{AppellF1}\left[\frac{3+n}{2}, 1+n, 4, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\Big) + \Big(16 \Big(-\frac{1}{3+n} 5 \left(1+n\right) \text{AppellF1}\left[1+\frac{1+n}{2}, n, 6, 1+\frac{3+n}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right] \text{Sec}\left[\frac{1}{2}\left(a+b x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right] +$$

$$\frac{1}{3+n} n \left(1+n\right) \text{AppellF1}\left[1+\frac{1+n}{2}, 1+n, 5, 1+\frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right] \text{Sec}\left[\frac{1}{2}\left(a+b x\right)\right]^2 \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]\Big)\Big) \Big/$$

$$\Big(\left(3+n\right) \text{AppellF1}\left[\frac{1+n}{2}, n, 5, \frac{3+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right] +$$

$$2 \Big(-5 \text{AppellF1}\left[\frac{3+n}{2}, n, 6, \frac{5+n}{2}, \text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2, -\text{Tan}\left[\frac{1}{2}\left(a+b x\right)\right]^2\right] + n$$

$$\text{AppellF1}\left[\frac{3+n}{2},1+n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)$$
$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)-\Big(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^4$$
$$\Big(-2\Big(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)$$
$$\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+(3+n)\Big(-\frac{1}{3+n}(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},\right.$$
$$\left.n,2,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2$$
$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}n(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},1+n,1,1+\frac{3+n}{2},\right.$$
$$\left.\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Big)-$$
$$2\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big(-\frac{1}{5+n}2(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},n,3,1+\frac{5+n}{2},\right.$$
$$\left.\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+$$
$$\frac{1}{5+n}n(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},1+n,2,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]-$$
$$n\Big(-\frac{1}{5+n}(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},1+n,2,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{5+n}$$
$$(1+n)(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},2+n,1,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Big)\Big)\Big)\Big)\Big/$$
$$\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-$$
$$2\Big(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)^2+$$
$$\Big(8\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$
$$\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^3\Big(2\Big(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Bigg)\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+$$

$$(3+n)\left(-\frac{1}{3+n}2(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},n,3,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}$$

$$n(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},1+n,2,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\right.\right.$$

$$\left.\left.\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Bigg)+2\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2$$

$$\left(-2\left(-\frac{1}{5+n}3(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},n,4,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{5+n}$$

$$n(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},1+n,3,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Bigg)+$$

$$n\left(-\frac{1}{5+n}2(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},1+n,3,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{5+n}$$

$$(1+n)(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},2+n,2,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Bigg)\Bigg)\Bigg)\Bigg)\Bigg/$$

$$\left(\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.\right.$$

$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.$$

$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Bigg)^2-$$

$$\left(24\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right.$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2\left(2\left(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Bigg)\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+$$

$$(3+n)\left(-\frac{1}{3+n}3(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},n,4,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}$$

$$n\,(1+n)\,\text{AppellF1}\Big[1+\frac{1+n}{2},1+n,3,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\Big[$$

$$\frac{1}{2}(a+b x)\Big]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Big)+2\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2$$

$$\Big(-3\Big(-\frac{1}{5+n}4\,(3+n)\,\text{AppellF1}\Big[1+\frac{3+n}{2},n,5,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{5+n}$$

$$n\,(3+n)\,\text{AppellF1}\Big[1+\frac{3+n}{2},1+n,4,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Big)+$$

$$n\,\Big(-\frac{1}{5+n}3\,(3+n)\,\text{AppellF1}\Big[1+\frac{3+n}{2},1+n,4,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{5+n}$$

$$(1+n)\,(3+n)\,\text{AppellF1}\Big[1+\frac{3+n}{2},2+n,3,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Big)\Big)\Big)\Big)\Big/$$

$$\Big(\Big((3+n)\,\text{AppellF1}\Big[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]+$$

$$2\,\Big(-3\,\text{AppellF1}\Big[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]+$$

$$n\,\text{AppellF1}\Big[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)^2+$$

$$\Big(32\,\text{AppellF1}\Big[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]$$

$$\Big(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)\,\Big(2\,\Big(-4\,\text{AppellF1}\Big[\frac{3+n}{2},n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]+n\,\text{AppellF1}\Big[\frac{3+n}{2},1+n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\Big)\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+$$

$$(3+n)\,\Big(-\frac{1}{3+n}4\,(1+n)\,\text{AppellF1}\Big[1+\frac{1+n}{2},n,5,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}$$

$$n\,(1+n)\,\text{AppellF1}\Big[1+\frac{1+n}{2},1+n,4,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\Big[$$

$$\frac{1}{2}(a+b x)\Big]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Big)+2\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2$$

$$\left(-4\left(-\frac{1}{5+n}5\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},\,n,\,6,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]+\frac{1}{5+n}$$
$$n\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},\,1+n,\,5,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]\right)+$$
$$n\left(-\frac{1}{5+n}4\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},\,1+n,\,5,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]+\frac{1}{5+n}$$
$$(1+n)\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},\,2+n,\,4,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.$$
$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]\right)\right)\right)\right)\Big/$$
$$\left(\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},\,n,\,4,\,\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+\right.\right.$$
$$2\left(-4\,\text{AppellF1}\left[\frac{3+n}{2},\,n,\,5,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+\right.$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},\,1+n,\,4,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)^2-$$
$$\left(16\,\text{AppellF1}\left[\frac{1+n}{2},\,n,\,5,\,\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right.$$
$$\left(2\left(-5\,\text{AppellF1}\left[\frac{3+n}{2},\,n,\,6,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+\right.\right.$$
$$\left.n\,\text{AppellF1}\left[\frac{3+n}{2},\,1+n,\,5,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)$$
$$\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]+(3+n)\left(-\frac{1}{3+n}5\,(1+n)\right.$$
$$\text{AppellF1}\left[1+\frac{1+n}{2},\,n,\,6,\,1+\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]+\frac{1}{3+n}n\,(1+n)\,\text{AppellF1}\Big[$$
$$1+\frac{1+n}{2},\,1+n,\,5,\,1+\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\Big]$$
$$\left.\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]\right)+2\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2$$
$$\left(-5\left(-\frac{1}{5+n}6\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},\,n,\,7,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]+\frac{1}{5+n}$$
$$n\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},\,1+n,\,6,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.$$

$$-\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}(a+b x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]\Bigg)+$$

$$n\left(-\frac{1}{5+n}5\,(3+n)\,\mathrm{AppellF1}\left[1+\frac{3+n}{2},1+n,6,1+\frac{5+n}{2},\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.$$

$$-\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\mathrm{Sec}\left[\frac{1}{2}(a+b x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{5+n}$$

$$(1+n)\,(3+n)\,\mathrm{AppellF1}\left[1+\frac{3+n}{2},2+n,5,1+\frac{5+n}{2},\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.\left.\left.\left.-\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\mathrm{Sec}\left[\frac{1}{2}(a+b x)\right]^2\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]\right)\right)\right)\right)\Big/$$

$$\left(\left(3+n\right)\mathrm{AppellF1}\left[\frac{1+n}{2},n,5,\frac{3+n}{2},\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.$$

$$2\left(-5\,\mathrm{AppellF1}\left[\frac{3+n}{2},n,6,\frac{5+n}{2},\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.$$

$$n\,\mathrm{AppellF1}\left[\frac{3+n}{2},1+n,5,\frac{5+n}{2},\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.\left.\left.-\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2\right)\Bigg)$$

Problem 369: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Sec}[a+b x]^5\,(d\,\mathrm{Tan}[a+b x])^n\,dx$$

Optimal (type 5, 78 leaves, 1 step):

$$\frac{1}{b\,d\,(1+n)}\left(\mathrm{Cos}[a+b x]^2\right)^{\frac{6+n}{2}}$$

$$\mathrm{Hypergeometric2F1}\left[\frac{1+n}{2},\frac{6+n}{2},\frac{3+n}{2},\mathrm{Sin}[a+b x]^2\right]\mathrm{Sec}[a+b x]^5\,(d\,\mathrm{Tan}[a+b x])^{1+n}$$

Result (type 5, 211 leaves):

$$\frac{1}{b\,(1+n)}$$

$$2\left(\mathrm{Hypergeometric2F1}\left[\frac{1+n}{2},1+n,\frac{3+n}{2},\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-8\left(\mathrm{Hypergeometric2F1}\left[\frac{1+n}{2},2+n,\right.\right.\right.$$

$$\frac{3+n}{2},\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]-3\,\mathrm{Hypergeometric2F1}\left[\frac{1+n}{2},3+n,\frac{3+n}{2},\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$4\,\mathrm{Hypergeometric2F1}\left[\frac{1+n}{2},4+n,\frac{3+n}{2},\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-$$

$$\left.\left.2\,\mathrm{Hypergeometric2F1}\left[\frac{1+n}{2},5+n,\frac{3+n}{2},\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)\right)$$

$$\left(\mathrm{Cos}[a+b x]\,\mathrm{Sec}\left[\frac{1}{2}(a+b x)\right]^2\right)^n\mathrm{Tan}\left[\frac{1}{2}(a+b x)\right]\,(d\,\mathrm{Tan}[a+b x])^n$$

Problem 372: Result unnecessarily involves higher level functions and more

than twice size of optimal antiderivative.

$$\int \text{Cos}[a+b\,x]\,(d\,\text{Tan}[a+b\,x])^{n}\,dx$$

Optimal (type 5, 72 leaves, 1 step):

$$\frac{1}{b\,d\,(1+n)}\text{Cos}[a+b\,x]\,\left(\text{Cos}[a+b\,x]^2\right)^{n/2}$$
$$\text{Hypergeometric2F1}\left[\frac{n}{2},\frac{1+n}{2},\frac{3+n}{2},\text{Sin}[a+b\,x]^2\right]\,(d\,\text{Tan}[a+b\,x])^{1+n}$$

Result (type 6, 4430 leaves):

$$\Big(2\,(3+n)\,\text{Cos}\left[\frac{1}{2}\,(a+b\,x)\right]^3\,\text{Cos}[a+b\,x]\,\text{Sin}\left[\frac{1}{2}\,(a+b\,x)\right]$$
$$\Big(-\Big(\Big(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\,\text{Sec}\left[\frac{1}{2}\,(a+b\,x)\right]^2\Big)\Big/$$
$$\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]-$$
$$2\,\Big(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]-$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\Big)\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\Big)\Big)+$$
$$\Big(2\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\Big)\Big/$$
$$\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]+$$
$$2\,\Big(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]+$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\Big)$$
$$\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\Big)\Big)\,\text{Tan}[a+b\,x]^n\,(d\,\text{Tan}[a+b\,x])^n\Big)\Big/$$
$$\Big(b\,(1+n)\,\Big(\frac{1}{1+n}2\,n\,(3+n)\,\text{Cos}\left[\frac{1}{2}\,(a+b\,x)\right]^3\,\text{Sec}[a+b\,x]^2\,\text{Sin}\left[\frac{1}{2}\,(a+b\,x)\right]$$
$$\Big(-\Big(\Big(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}\,(a+b\,x)\right]^2\Big)\Big/\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]-2\,\Big(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]-n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\right.$$
$$\left.\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\Big)\,\text{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\Big)\Big)+$$

$$\left(2\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+n\right.$$
$$\left.\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)$$
$$\left.\left.\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)\right)\,\text{Tan}[a+b\,x]^{-1+n}+\frac{1}{1+n}(3+n)\,\text{Cos}\left[\frac{1}{2}(a+b\,x)\right]^4$$
$$\left(-\left(\left(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right.\right.\right.$$
$$\left.\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\right)\Big/\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.\right.$$
$$-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\Big]-2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.\right.$$
$$-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\Big]-n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\right.$$
$$\left.\left.\left.\left.\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)\right)+$$
$$\left(2\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+n\right.$$
$$\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)\right)$$
$$\text{Tan}[a+b\,x]^n-\frac{1}{1+n}3\,(3+n)\,\text{Cos}\left[\frac{1}{2}(a+b\,x)\right]^2\,\text{Sin}\left[\frac{1}{2}(a+b\,x)\right]^2$$
$$\left(-\left(\left(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right.\right.\right.$$
$$\left.\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\right)\Big/\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.\right.$$
$$-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\Big]-2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.\right.$$
$$-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\Big]-n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\right.$$
$$\left.\left.\left.\left.\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)\right)+$$
$$\left(2\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\Big/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+\right.$$

$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right]+n\right.$$
$$\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,\right.$$
$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right)\right)$$
$$\text{Tan}[a+bx]^n+\frac{1}{1+n}2(3+n)\text{Cos}\left[\frac{1}{2}(a+bx)\right]^3\text{Sin}\left[\frac{1}{2}(a+bx)\right]$$
$$\left(-\left(\left(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right]\right.\right.\right.$$
$$\left.\text{Sec}\left[\frac{1}{2}(a+bx)\right]^2\text{Tan}\left[\frac{1}{2}(a+bx)\right]\right)\Big/\left((3+n)\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big]-2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big]-n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\right.$$
$$\left.\left.\left.\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right)\right)-$$
$$\left(\text{Sec}\left[\frac{1}{2}(a+bx)\right]^2\left(-\frac{1}{3+n}(1+n)\text{AppellF1}\left[1+\frac{1+n}{2},n,2,1+\frac{3+n}{2},\right.\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big]\text{Sec}\left[\frac{1}{2}(a+bx)\right]^2\text{Tan}\left[\frac{1}{2}(a+bx)\right]+$$
$$\frac{1}{3+n}n(1+n)\text{AppellF1}\left[1+\frac{1+n}{2},1+n,1,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+bx)\right]^2\text{Tan}\left[\frac{1}{2}(a+bx)\right]\right)\right)\Big/$$
$$\left((3+n)\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right]-\right.$$
$$2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right]-n\right.$$
$$\left.\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right]\right)$$
$$\left.\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right)+\left(2\left(-\frac{1}{3+n}2(1+n)\text{AppellF1}\left[1+\frac{1+n}{2},n,3,1+\frac{3+n}{2},\right.\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\Big]\text{Sec}\left[\frac{1}{2}(a+bx)\right]^2\text{Tan}\left[\frac{1}{2}(a+bx)\right]+$$
$$\frac{1}{3+n}n(1+n)\text{AppellF1}\left[1+\frac{1+n}{2},1+n,2,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+bx)\right]^2\text{Tan}\left[\frac{1}{2}(a+bx)\right]\right)\right)\Big/$$
$$\left((3+n)\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right]+\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right]+n\right.$$
$$\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+bx)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big)+$$

$$\Big(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2$$

$$\Big(-2\,\Big(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]-$$

$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\Big)$$

$$\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]+\left(3+n\right)\,\Big(-\frac{1}{3+n}\left(1+n\right)\text{AppellF1}\Big[1+\frac{1+n}{2},$$

$$n,2,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2$$

$$\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]+\frac{1}{3+n}n\,\left(1+n\right)\text{AppellF1}\Big[1+\frac{1+n}{2},1+n,1,1+\frac{3+n}{2},$$

$$\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]\Big)-$$

$$2\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\,\Big(-\frac{1}{5+n}2\,\left(3+n\right)\text{AppellF1}\Big[1+\frac{3+n}{2},n,3,1+\frac{5+n}{2},$$

$$\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]+$$

$$\frac{1}{5+n}n\,\left(3+n\right)\text{AppellF1}\Big[1+\frac{3+n}{2},1+n,2,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]-$$

$$n\,\Big(-\frac{1}{5+n}\left(3+n\right)\text{AppellF1}\Big[1+\frac{3+n}{2},1+n,2,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]+\frac{1}{5+n}$$

$$\left(1+n\right)\,\left(3+n\right)\text{AppellF1}\Big[1+\frac{3+n}{2},2+n,1,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]\Big)\Big)\Big)\Big)\Big/$$

$$\Big(\left(3+n\right)\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]-$$

$$2\,\Big(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]-$$

$$n\,\text{AppellF1}\Big[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\Big)\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big)^2-$$

$$\Big(2\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]$$

$$\Big(2\,\Big(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+$$

$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\Big)$$

$$\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2 \text{Tan}\left[\frac{1}{2}(a+b x)\right]+(3+n)\left(-\frac{1}{3+n}2(1+n)\right.$$
$$\text{AppellF1}\left[1+\frac{1+n}{2},n,3,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2 \text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}n(1+n)\text{AppellF1}\left[\right.$$
$$1+\frac{1+n}{2},1+n,2,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$
$$\left.\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2 \text{Tan}\left[\frac{1}{2}(a+b x)\right]\right)+2\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2$$
$$\left(-2\left(-\frac{1}{5+n}3(3+n)\text{AppellF1}\left[1+\frac{3+n}{2},n,4,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2 \text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{5+n}$$
$$n(3+n)\text{AppellF1}\left[1+\frac{3+n}{2},1+n,3,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2 \text{Tan}\left[\frac{1}{2}(a+b x)\right]\right)+$$
$$n\left(-\frac{1}{5+n}2(3+n)\text{AppellF1}\left[1+\frac{3+n}{2},1+n,3,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2 \text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{5+n}$$
$$(1+n)(3+n)\text{AppellF1}\left[1+\frac{3+n}{2},2+n,2,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2 \text{Tan}\left[\frac{1}{2}(a+b x)\right]\right)\right)\right)\right)\Big/$$
$$\left(\left((3+n)\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.\right.$$
$$2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2 \text{Tan}[a+b x]^n\right)\right)$$

Problem 373: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int \text{Cos}[a+b x]^3\,(d\,\text{Tan}[a+b x])^n\,dx$$

Optimal (type 5, 78 leaves, 1 step):

$$\frac{1}{b\,d\,(1+n)}\text{Cos}[a+b x]^3\left(\text{Cos}[a+b x]^2\right)^{\frac{1}{2}(-2+n)}$$
$$\text{Hypergeometric2F1}\left[\frac{1}{2}(-2+n),\frac{1+n}{2},\frac{3+n}{2},\text{Sin}[a+b x]^2\right](d\,\text{Tan}[a+b x])^{1+n}$$

Result (type 6, 9792 leaves):

$$-\left(\left(2^{1+n}\,(3+n)\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]\,\left(-\frac{\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]}{-1+\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2}\right)^n\right.\right.$$

$$\left(\left(\mathrm{AppellF1}\left[\frac{1+n}{2},\,n,\,1,\,\frac{3+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\right.\right.$$

$$\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right)^3\right)\Big/$$

$$\left((3+n)\,\mathrm{AppellF1}\left[\frac{1+n}{2},\,n,\,1,\,\frac{3+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]-\right.$$

$$2\,\left(\mathrm{AppellF1}\left[\frac{3+n}{2},\,n,\,2,\,\frac{5+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]-\right.$$

$$\left.n\,\mathrm{AppellF1}\left[\frac{3+n}{2},\,1+n,\,1,\,\frac{5+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\right)$$

$$\left.\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right)-\left(6\,\mathrm{AppellF1}\left[\frac{1+n}{2},\,n,\,2,\,\frac{3+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.\right.$$

$$\left.-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\,\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right)^2\right)\Big/$$

$$\left((3+n)\,\mathrm{AppellF1}\left[\frac{1+n}{2},\,n,\,2,\,\frac{3+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]+\right.$$

$$2\,\left(-2\,\mathrm{AppellF1}\left[\frac{3+n}{2},\,n,\,3,\,\frac{5+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]+\right.$$

$$\left.n\,\mathrm{AppellF1}\left[\frac{3+n}{2},\,1+n,\,2,\,\frac{5+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\right)$$

$$\left.\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right)+\left(12\,\mathrm{AppellF1}\left[\frac{1+n}{2},\,n,\,3,\,\frac{3+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.\right.$$

$$\left.-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\,\left.\left(1+\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right)\right)\Big/$$

$$\left((3+n)\,\mathrm{AppellF1}\left[\frac{1+n}{2},\,n,\,3,\,\frac{3+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]+\right.$$

$$2\,\left(-3\,\mathrm{AppellF1}\left[\frac{3+n}{2},\,n,\,4,\,\frac{5+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]+\right.$$

$$n\,\mathrm{AppellF1}\left[\frac{3+n}{2},\,1+n,\,3,\,\frac{5+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\right.$$

$$\left.\left.\left.-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\right)\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right)-$$

$$\left(8\,\mathrm{AppellF1}\left[\frac{1+n}{2},\,n,\,4,\,\frac{3+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\right)\Big/$$

$$\left((3+n)\,\mathrm{AppellF1}\left[\frac{1+n}{2},\,n,\,4,\,\frac{3+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]+\right.$$

$$2\,\left(-4\,\mathrm{AppellF1}\left[\frac{3+n}{2},\,n,\,5,\,\frac{5+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]+\right.$$

$$\left.n\,\mathrm{AppellF1}\left[\frac{3+n}{2},\,1+n,\,4,\,\frac{5+n}{2},\,\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2,\,-\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right]\right)$$

$$\left.\left.\mathrm{Tan}\left[\frac{1}{2}\,(a+b\,x)\right]^2\right)\right)\,\mathrm{Tan}[a+b\,x]^{-n}\,(d\,\mathrm{Tan}[a+b\,x])^n$$

$$\left(-\frac{1}{8} i \operatorname{Sin}[3(a+bx)] \operatorname{Tan}[a+bx]^n + \frac{3}{8} \operatorname{Sin}[2(a+bx)] \operatorname{Sin}[3(a+bx)] \operatorname{Tan}[a+bx]^n + \frac{3}{8} i \operatorname{Sin}[2(a+bx)]^2 \operatorname{Sin}[3(a+bx)] \operatorname{Tan}[a+bx]^n - \frac{1}{8} \operatorname{Sin}[2(a+bx)]^3 \operatorname{Sin}[3(a+bx)] \operatorname{Tan}[a+bx]^n + \operatorname{Cos}[3(a+bx)] \left(\frac{1}{8} \operatorname{Tan}[a+bx]^n + \frac{3}{8} i \operatorname{Sin}[2(a+bx)] \operatorname{Tan}[a+bx]^n - \frac{3}{8} \operatorname{Sin}[2(a+bx)]^2 \operatorname{Tan}[a+bx]^n - \frac{1}{8} i \operatorname{Sin}[2(a+bx)]^3 \operatorname{Tan}[a+bx]^n\right) + \operatorname{Cos}[2(a+bx)]^3 \left(\frac{1}{8} \operatorname{Cos}[3(a+bx)] \operatorname{Tan}[a+bx]^n - \frac{1}{8} i \operatorname{Sin}[3(a+bx)] \operatorname{Tan}[a+bx]^n\right) + \operatorname{Cos}[2(a+bx)]^2 \left(-\frac{3}{8} i \operatorname{Sin}[3(a+bx)] \operatorname{Tan}[a+bx]^n + \frac{3}{8} \operatorname{Sin}[2(a+bx)] \operatorname{Sin}[3(a+bx)] \operatorname{Tan}[a+bx]^n + \operatorname{Cos}[3(a+bx)] \left(\frac{3}{8} \operatorname{Tan}[a+bx]^n + \frac{3}{8} i \operatorname{Sin}[2(a+bx)] \operatorname{Tan}[a+bx]^n\right)\right) + \operatorname{Cos}[2(a+bx)] \left(-\frac{3}{8} i \operatorname{Sin}[3(a+bx)] \operatorname{Tan}[a+bx]^n + \frac{3}{4} \operatorname{Sin}[2(a+bx)] \operatorname{Sin}[3(a+bx)] \operatorname{Tan}[a+bx]^n + \frac{3}{8} i \operatorname{Sin}[2(a+bx)]^2 \operatorname{Sin}[3(a+bx)] \operatorname{Tan}[a+bx]^n + \operatorname{Cos}[3(a+bx)] \left(\frac{3}{8} \operatorname{Tan}[a+bx]^n + \frac{3}{4} i \operatorname{Sin}[2(a+bx)] \operatorname{Tan}[a+bx]^n - \frac{3}{8} \operatorname{Sin}[2(a+bx)]^2 \operatorname{Tan}[a+bx]^n\right)\right)\right) \Bigg/$$

$$\Bigg(b (1+n) \left(1+\operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right)^4 \left(\frac{1}{(1+n)\left(1+\operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right)^5} 2^{3+n} (3+n) \operatorname{Sec}\left[\frac{1}{2}(a+bx)\right]^2 \operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2 \left(-\frac{\operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]}{-1+\operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2}\right)^n \right.$$

$$\left(\left(\operatorname{AppellF1}\left[\frac{1+n}{2}, n, 1, \frac{3+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right] \left(1+\operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right)^3\right) \Bigg/ \left((3+n) \operatorname{AppellF1}\left[\frac{1+n}{2}, n, 1, \frac{3+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right] - 2 \left(\operatorname{AppellF1}\left[\frac{3+n}{2}, n, 2, \frac{5+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right] - n \operatorname{AppellF1}\left[\frac{3+n}{2}, 1+n, 1, \frac{5+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right]\right) \operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right) - \right.$$

$$\left(6 \operatorname{AppellF1}\left[\frac{1+n}{2}, n, 2, \frac{3+n}{2}, \operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2, -\operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right] \left(1+\operatorname{Tan}\left[\frac{1}{2}(a+bx)\right]^2\right)^2\right) \Bigg/ \left((3+n) \operatorname{AppellF1}\left[\frac{1+n}{2}, n, 2, \frac{3+n}{2},\right.\right.$$

$$\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]+2\,\Big(-2\,\text{AppellF1}[\tfrac{3+n}{2},\,n,\,3,\,\tfrac{5+n}{2},$$

$$\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]+n\,\text{AppellF1}[\tfrac{3+n}{2},\,1+n,\,2,$$

$$\tfrac{5+n}{2},\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]\Big)\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2\Big)+$$

$$\Big(12\,\text{AppellF1}[\tfrac{1+n}{2},\,n,\,3,\,\tfrac{3+n}{2},\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]$$

$$\big(1+\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2\big)\Big)\Big/\Big(\,(3+n)\,\text{AppellF1}[\tfrac{1+n}{2},\,n,\,3,\,\tfrac{3+n}{2},$$

$$\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]+2\,\Big(-3\,\text{AppellF1}[\tfrac{3+n}{2},\,n,\,4,\,\tfrac{5+n}{2},$$

$$\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]+n\,\text{AppellF1}[\tfrac{3+n}{2},\,1+n,\,3,$$

$$\tfrac{5+n}{2},\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]\Big)\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2\Big)-$$

$$\Big(8\,\text{AppellF1}[\tfrac{1+n}{2},\,n,\,4,\,\tfrac{3+n}{2},\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]\Big)\Big/$$

$$\Big(\,(3+n)\,\text{AppellF1}[\tfrac{1+n}{2},\,n,\,4,\,\tfrac{3+n}{2},\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]+$$

$$2\,\Big(-4\,\text{AppellF1}[\tfrac{3+n}{2},\,n,\,5,\,\tfrac{5+n}{2},\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]+$$

$$n\,\text{AppellF1}[\tfrac{3+n}{2},\,1+n,\,4,\,\tfrac{5+n}{2},\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,$$

$$-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]\Big)\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2\Big)\Big)-$$

$$\frac{1}{(1+n)\,\big(1+\text{Tan}[\frac{1}{2}\,(a+b\,x)]^2\big)^4}\,2^n\,(3+n)\,\text{Sec}[\tfrac{1}{2}\,(a+b\,x)]^2\,\left(-\frac{\text{Tan}[\frac{1}{2}\,(a+b\,x)]}{-1+\text{Tan}[\frac{1}{2}\,(a+b\,x)]^2}\right)^n$$

$$\Big(\Big(\text{AppellF1}[\tfrac{1+n}{2},\,n,\,1,\,\tfrac{3+n}{2},\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]$$

$$\big(1+\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2\big)^3\Big)\Big/\Big(\,(3+n)\,\text{AppellF1}[\tfrac{1+n}{2},\,n,\,1,\,\tfrac{3+n}{2},$$

$$\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]-2\,\Big(\text{AppellF1}[\tfrac{3+n}{2},\,n,\,2,\,\tfrac{5+n}{2},$$

$$\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]-n\,\text{AppellF1}[\tfrac{3+n}{2},\,1+n,\,1,$$

$$\tfrac{5+n}{2},\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]\Big)\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2\Big)-$$

$$\Big(6\,\text{AppellF1}[\tfrac{1+n}{2},\,n,\,2,\,\tfrac{3+n}{2},\,\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]$$

$$\big(1+\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2\big)^2\Big)\Big/\Big(\,(3+n)\,\text{AppellF1}[\tfrac{1+n}{2},\,n,\,2,\,\tfrac{3+n}{2},$$

$$\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2,\,-\text{Tan}[\tfrac{1}{2}\,(a+b\,x)]^2]+2\,\Big(-2\,\text{AppellF1}[\tfrac{3+n}{2},\,n,\,3,\,\tfrac{5+n}{2},$$

$$\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]+n\,\text{AppellF1}\Big[\frac{3+n}{2},\ 1+n,\ 2,$$

$$\frac{5+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]\Big)\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big)+$$

$$\Big(12\,\text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 3,\ \frac{3+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]$$

$$\Big(1+\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big)\Big)\Big/\Big((3+n)\ \text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 3,\ \frac{3+n}{2},$$

$$\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]+2\ \Big(-3\,\text{AppellF1}\Big[\frac{3+n}{2},\ n,\ 4,\ \frac{5+n}{2},$$

$$\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]+n\,\text{AppellF1}\Big[\frac{3+n}{2},\ 1+n,\ 3,$$

$$\frac{5+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]\Big)\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big)-$$

$$\Big(8\,\text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 4,\ \frac{3+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]\Big)\Big/$$

$$\Big((3+n)\ \text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 4,\ \frac{3+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]+$$

$$2\ \Big(-4\,\text{AppellF1}\Big[\frac{3+n}{2},\ n,\ 5,\ \frac{5+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]+$$

$$n\,\text{AppellF1}\Big[\frac{3+n}{2},\ 1+n,\ 4,\ \frac{5+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,$$

$$-\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]\Big)\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big)\Big)-$$

$$\frac{1}{(1+n)\ \left(1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)^4}\,2^{1+n}\,n\,(3+n)\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]$$

$$\left(-\frac{\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2}\right)^{-1+n}$$

$$\left(\frac{\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2}{\left(-1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)^2}-\frac{\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2}{2\left(-1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)}\right)$$

$$\Big(\Big(\text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 1,\ \frac{3+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]$$

$$\Big(1+\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big)^3\Big)\Big/\Big((3+n)\ \text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 1,\ \frac{3+n}{2},$$

$$\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]-2\ \Big(\text{AppellF1}\Big[\frac{3+n}{2},\ n,\ 2,\ \frac{5+n}{2},$$

$$\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]-n\,\text{AppellF1}\Big[\frac{3+n}{2},\ 1+n,\ 1,$$

$$\frac{5+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]\Big)\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big)-$$

$$\Big(6\,\text{AppellF1}\Big[\frac{1+n}{2},\ n,\ 2,\ \frac{3+n}{2},\ \text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2,\ -\text{Tan}\Big[\frac{1}{2}(a+b\,x)\Big]^2\Big]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2\Big)\Big) \Big/ \Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+2\Big(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\right.$$

$$\left.\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)+$$

$$\Big(12\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$

$$\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)\Big)\Big/\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+2\Big(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,3,\right.$$

$$\left.\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)-$$

$$\Big(8\,\text{AppellF1}\left[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)\Big/$$

$$\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$2\Big(-4\,\text{AppellF1}\left[\frac{3+n}{2},n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)\Big)-$$

$$\frac{1}{(1+n)\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^4}\,2^{1+n}(3+n)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]\left(-\frac{\text{Tan}\left[\frac{1}{2}(a+b x)\right]}{-1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2}\right)^n$$

$$\Big(\Big(3\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2\Big)\Big/$$

$$\Big((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-$$

$$2\Big(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-$$

$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Big)\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big)+$$

$$\Big(\Big(-\frac{1}{3+n}(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},n,2,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}n(1+n)$$
$$\text{AppellF1}\left[1+\frac{1+n}{2},1+n,1,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Bigg)\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^3\Bigg)\Bigg/$$
$$\Bigg((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-$$
$$2\Bigg(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]-$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Bigg)-$$
$$\Bigg(12\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)\Bigg)\Bigg/$$
$$\Bigg((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$
$$2\Bigg(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Bigg)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Bigg)-$$
$$\Bigg(6\Bigg(-\frac{1}{3+n}2(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},n,3,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}n(1+n)$$
$$\text{AppellF1}\left[1+\frac{1+n}{2},1+n,2,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$
$$\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Bigg)\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2\Bigg)\Bigg/$$
$$\Bigg((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$
$$2\Bigg(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\Bigg)$$
$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Bigg)+\Bigg(12\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Bigg)\Bigg/$$
$$\Bigg((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+$$

$$2\left(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Bigg)+$$
$$\left(12\left(-\frac{1}{3+n}3(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},n,4,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.\right.$$
$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}n(1+n)$$
$$\text{AppellF1}\left[1+\frac{1+n}{2},1+n,3,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]$$
$$\left.\left.\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\right)\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)\right)\Bigg/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.$$
$$2\left(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.$$
$$\left.n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)$$
$$\left.\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)-\left(8\left(-\frac{1}{3+n}4(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},n,5,1+\frac{3+n}{2},\right.\right.\right.$$
$$\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+$$
$$\frac{1}{3+n}n(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},1+n,4,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\right)\right)\Bigg/$$
$$\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.$$
$$2\left(-4\,\text{AppellF1}\left[\frac{3+n}{2},n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.$$
$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Bigg)-$$
$$\left(\text{AppellF1}\left[\frac{1+n}{2},n,1,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right.$$
$$\left(1+\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^3\left(-2\left(\text{AppellF1}\left[\frac{3+n}{2},n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.\right.$$
$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]-n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,1,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+$$
$$(3+n)\left(-\frac{1}{3+n}(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},n,2,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]+\frac{1}{3+n}$$

$$n\,\left(1+n\right)\,\text{AppellF1}\Big[1+\frac{1+n}{2},\,1+n,\,1,\,1+\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]\Big)-$$

$$2\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\,\Big(-\frac{1}{5+n}2\,\left(3+n\right)\,\text{AppellF1}\Big[1+\frac{3+n}{2},\,n,\,3,\,1+\frac{5+n}{2},$$

$$\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\,\text{Tan}\Big[$$

$$\frac{1}{2}\left(a+b\,x\right)\Big]+\frac{1}{5+n}n\,\left(3+n\right)\,\text{AppellF1}\Big[1+\frac{3+n}{2},\,1+n,\,2,\,1+\frac{5+n}{2},\,\text{Tan}\Big[$$

$$\frac{1}{2}\left(a+b\,x\right)\Big]^2,\,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]-$$

$$n\,\Big(-\frac{1}{5+n}\left(3+n\right)\,\text{AppellF1}\Big[1+\frac{3+n}{2},\,1+n,\,2,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]+\frac{1}{5+n}\left(1+n\right)$$

$$\left(3+n\right)\,\text{AppellF1}\Big[1+\frac{3+n}{2},\,2+n,\,1,\,1+\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,$$

$$-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]\Big)\Big)\Big)\Big)\Big/$$

$$\Big(\left(3+n\right)\,\text{AppellF1}\left[\frac{1+n}{2},\,n,\,1,\,\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]-$$

$$2\,\Big(\text{AppellF1}\left[\frac{3+n}{2},\,n,\,2,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]-$$

$$n\,\text{AppellF1}\left[\frac{3+n}{2},\,1+n,\,1,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\Big)$$

$$\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big)^2+\Big(6\,\text{AppellF1}\Big[\frac{1+n}{2},\,n,\,2,\,\frac{3+n}{2},$$

$$\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]\,\left(1+\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right)^2$$

$$\Big(2\,\Big(-2\,\text{AppellF1}\left[\frac{3+n}{2},\,n,\,3,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]+$$

$$n\,\text{AppellF1}\left[\frac{3+n}{2},\,1+n,\,2,\,\frac{5+n}{2},\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\right]\Big)$$

$$\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]+\left(3+n\right)\,\Big(-\frac{1}{3+n}2\,\left(1+n\right)\,\text{AppellF1}\Big[$$

$$1+\frac{1+n}{2},\,n,\,3,\,1+\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]$$

$$\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]+\frac{1}{3+n}n\,\left(1+n\right)\,\text{AppellF1}\Big[$$

$$1+\frac{1+n}{2},\,1+n,\,2,\,1+\frac{3+n}{2},\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2,\,-\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\Big]$$

$$\text{Sec}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]\Big)+2\,\text{Tan}\left[\frac{1}{2}\left(a+b\,x\right)\right]^2$$

$$\left(-2\left(-\frac{1}{5+n}3\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},n,4,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]+\frac{1}{5+n}n\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},1+n,3,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]\right)+n\left(-\frac{1}{5+n}2\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},1+n,3,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]+\frac{1}{5+n}(1+n)\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},2+n,2,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]\right)\right)\right)\right)\Big/$$

$$\left(\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,2,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+2\left(-2\,\text{AppellF1}\left[\frac{3+n}{2},n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,2,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)^2-\left(12\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\left(1+\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)\left(2\left(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]+(3+n)\left(-\frac{1}{3+n}3\,(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},n,4,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]+\frac{1}{3+n}n\,(1+n)\,\text{AppellF1}\left[1+\frac{1+n}{2},1+n,3,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]\right)+2\,\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\left(-3\left(-\frac{1}{5+n}4\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},n,5,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]+\frac{1}{5+n}n\,(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},1+n,4,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,\right.\right.\right.\right.\right.$$

$$-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]\,\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Big)+$$

$$n\left(-\frac{1}{5+n}3(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},1+n,4,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{5+n}(1+n)$$

$$(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},2+n,3,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\Big)\Big)\Big)\Big)\Big/$$

$$\left(\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,3,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.\right.$$

$$2\left(-3\,\text{AppellF1}\left[\frac{3+n}{2},n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.$$

$$n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,3,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right)^2+$$

$$\left(8\,\text{AppellF1}\left[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right.$$

$$\left(2\left(-4\,\text{AppellF1}\left[\frac{3+n}{2},n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]+\right.\right.$$

$$\left.n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\right)$$

$$\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+(3+n)\left(-\frac{1}{3+n}4(1+n)\,\text{AppellF1}\right[$$

$$1+\frac{1+n}{2},n,5,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]$$

$$\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{3+n}n(1+n)\,\text{AppellF1}\Big[$$

$$1+\frac{1+n}{2},1+n,4,1+\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\Big]$$

$$\left.\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\right)+2\,\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2$$

$$\left(-4\left(-\frac{1}{5+n}5(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},n,6,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{5+n}$$

$$n(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},1+n,5,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.$$

$$\left.\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]\right)+$$

$$n\left(-\frac{1}{5+n}4(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},1+n,5,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2,\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(a+b x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b x)\right]+\frac{1}{5+n}(1+n)$$

$$\left.\left.\left.\left.\left.(3+n)\,\text{AppellF1}\left[1+\frac{3+n}{2},2+n,4,1+\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(a+b\,x)\right]^2\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]\right)\right)\right)\right)\right/$$

$$\left(\left((3+n)\,\text{AppellF1}\left[\frac{1+n}{2},n,4,\frac{3+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+2\left(-4\,\text{AppellF1}\left[\frac{3+n}{2},n,5,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]+n\,\text{AppellF1}\left[\frac{3+n}{2},1+n,4,\frac{5+n}{2},\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2,-\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right]\right)\text{Tan}\left[\frac{1}{2}(a+b\,x)\right]^2\right)^2\right)\right)\right)$$

Problem 374: Result more than twice size of optimal antiderivative.

$$\int (b\,\text{Csc}[e+f\,x])^m\,\text{Tan}[e+f\,x]^3\,dx$$

Optimal (type 5, 40 leaves, 2 steps):

$$-\frac{(b\,\text{Csc}[e+f\,x])^m\,\text{Hypergeometric2F1}\left[2,\frac{m}{2},\frac{2+m}{2},\text{Csc}[e+f\,x]^2\right]}{f\,m}$$

Result (type 5, 108 leaves):

$$\frac{1}{f\,(-2+m)}(b\,\text{Csc}[e+f\,x])^m\left(\text{Hypergeometric2F1}\left[1-\frac{m}{2},1-\frac{m}{2},2-\frac{m}{2},-\text{Tan}[e+f\,x]^2\right]-\text{Hypergeometric2F1}\left[1-\frac{m}{2},-\frac{m}{2},2-\frac{m}{2},-\text{Tan}[e+f\,x]^2\right]\right)\left(\text{Sec}[e+f\,x]^2\right)^{1-\frac{m}{2}}\text{Sin}[e+f\,x]^2$$

Problem 379: Result more than twice size of optimal antiderivative.

$$\int (b\,\text{Csc}[e+f\,x])^m\,\text{Tan}[e+f\,x]^4\,dx$$

Optimal (type 5, 63 leaves, 1 step):

$$\frac{1}{3\,f}(b\,\text{Csc}[e+f\,x])^m\,\text{Hypergeometric2F1}\left[-\frac{3}{2},\frac{1}{2}(-3+m),-\frac{1}{2},\text{Cos}[e+f\,x]^2\right]\left(\text{Sin}[e+f\,x]^2\right)^{\frac{1}{2}(-3+m)}\text{Tan}[e+f\,x]^3$$

Result (type 5, 171 leaves):

$$-\left(\left(\left(b\,\mathrm{Csc}[e+f\,x]\right)^m\left(\mathrm{Sec}[e+f\,x]^2\right)^{-m/2}\mathrm{Tan}[e+f\,x]\right.\right.$$
$$\left(\left(-3+m\right)\mathrm{Hypergeometric2F1}\left[\frac{1}{2}-\frac{m}{2},1-\frac{m}{2},\frac{3}{2}-\frac{m}{2},-\mathrm{Tan}[e+f\,x]^2\right]-\left(-3+m\right)\right.$$
$$\mathrm{Hypergeometric2F1}\left[\frac{1}{2}-\frac{m}{2},-\frac{m}{2},\frac{3}{2}-\frac{m}{2},-\mathrm{Tan}[e+f\,x]^2\right]+\left(-1+m\right)\mathrm{Hypergeometric2F1}\Big[$$
$$\left.\left.\left.\frac{3}{2}-\frac{m}{2},-\frac{m}{2},\frac{5}{2}-\frac{m}{2},-\mathrm{Tan}[e+f\,x]^2\Big]\,\mathrm{Tan}[e+f\,x]^2\right)\right)\Big/\left(f\left(-3+m\right)\left(-1+m\right)\right)\right)$$

Problem 381: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Cot}[e+f\,x]^2\left(b\,\mathrm{Csc}[e+f\,x]\right)^m\,dx$$

Optimal (type 5, 63 leaves, 1 step):

$$-\frac{1}{3\,f}\mathrm{Cot}[e+f\,x]^3\left(b\,\mathrm{Csc}[e+f\,x]\right)^m\mathrm{Hypergeometric2F1}\left[\frac{3}{2},\frac{3+m}{2},\frac{5}{2},\mathrm{Cos}[e+f\,x]^2\right]\left(\mathrm{Sin}[e+f\,x]^2\right)^{\frac{3+m}{2}}$$

Result (type 5, 186 leaves):

$$-\frac{1}{2\,f\left(-1+m^2\right)}$$
$$\left(b\,\mathrm{Csc}[e+f\,x]\right)^m\left(-4\left(1+m\right)\mathrm{Hypergeometric2F1}\left[1-m,\frac{1}{2}-\frac{m}{2},\frac{3}{2}-\frac{m}{2},-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+\right.$$
$$\left(-1+m\right)\mathrm{Cot}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\mathrm{Hypergeometric2F1}\left[-\frac{1}{2}-\frac{m}{2},-m,\frac{1}{2}-\frac{m}{2},-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]+$$
$$\left.\left(1+m\right)\mathrm{Hypergeometric2F1}\left[\frac{1}{2}-\frac{m}{2},-m,\frac{3}{2}-\frac{m}{2},-\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right]\right)$$
$$\left(\mathrm{Sec}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\right)^{-m}\mathrm{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]$$

Problem 382: Result more than twice size of optimal antiderivative.

$$\int \mathrm{Cot}[e+f\,x]^4\left(b\,\mathrm{Csc}[e+f\,x]\right)^m\,dx$$

Optimal (type 5, 63 leaves, 1 step):

$$-\frac{1}{5\,f}\mathrm{Cot}[e+f\,x]^5\left(b\,\mathrm{Csc}[e+f\,x]\right)^m\mathrm{Hypergeometric2F1}\left[\frac{5}{2},\frac{5+m}{2},\frac{7}{2},\mathrm{Cos}[e+f\,x]^2\right]\left(\mathrm{Sin}[e+f\,x]^2\right)^{\frac{5+m}{2}}$$

Result (type 5, 302 leaves):

$$\frac{1}{8 f} \text{Cot}\left[\frac{1}{2} (e+f x)\right]^3 (b \text{Csc}[e+f x])^m \left(\text{Sec}\left[\frac{1}{2} (e+f x)\right]^2\right)^{-m}$$
$$\left(-\frac{\text{Hypergeometric2F1}\left[-\frac{3}{2}-\frac{m}{2},-m,-\frac{1}{2}-\frac{m}{2},-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right]}{3+m}+\frac{1}{1+m}\right.$$
$$5\,\text{Hypergeometric2F1}\left[-\frac{1}{2}-\frac{m}{2},-m,\frac{1}{2}-\frac{m}{2},-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right] \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2+$$
$$\text{Tan}\left[\frac{1}{2} (e+f x)\right]^4 \left(-\frac{1}{-1+m}16\,\text{Hypergeometric2F1}\left[1-m,\frac{1}{2}-\frac{m}{2},\frac{3}{2}-\frac{m}{2},-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right]+\right.$$
$$\frac{5\,\text{Hypergeometric2F1}\left[\frac{1}{2}-\frac{m}{2},-m,\frac{3}{2}-\frac{m}{2},-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right]}{-1+m}+\frac{1}{3-m}$$
$$\left.\left.\text{Hypergeometric2F1}\left[\frac{3}{2}-\frac{m}{2},-m,\frac{5}{2}-\frac{m}{2},-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right] \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right)\right)$$

Problem 387: Result unnecessarily involves higher level functions and more than twice size of optimal antiderivative.

$$\int (a \text{Csc}[e+f x])^m (b \text{Tan}[e+f x])^n \, dx$$

Optimal (type 5, 89 leaves, 3 steps):

$$\frac{1}{b f (1-m+n)} \left(\text{Cos}[e+f x]^2\right)^{\frac{1+n}{2}} (a \text{Csc}[e+f x])^m$$
$$\text{Hypergeometric2F1}\left[\frac{1+n}{2},\frac{1}{2} (1-m+n),\frac{1}{2} (3-m+n),\text{Sin}[e+f x]^2\right] (b \text{Tan}[e+f x])^{1+n}$$

Result (type 6, 2348 leaves):

$$-\left(\left(\left((-3+m-n) \text{AppellF1}\left[\frac{1}{2} (1-m+n),n,1-m,\frac{1}{2} (3-m+n),\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2,\right.\right.\right.\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right] \text{Csc}[e+f x]^{-1+m} (a \text{Csc}[e+f x])^m \text{Tan}[e+f x]^n (b \text{Tan}[e+f x])^n\right)\Big/$$
$$\left(f (-1+m-n) \left((-3+m-n) \text{AppellF1}\left[\frac{1}{2} (1-m+n),n,1-m,\frac{1}{2} (3-m+n),\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2,\right.\right.\right.$$
$$\left.-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right]-2 \left((-1+m) \text{AppellF1}\left[\frac{1}{2} (3-m+n),n,2-m,\frac{1}{2} (5-m+n),\right.\right.$$
$$\left.\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right]+n\,\text{AppellF1}\left[\frac{1}{2} (3-m+n),1+n,1-m,\right.$$
$$\left.\left.\left.\frac{1}{2} (5-m+n),\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2,-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right]\right) \text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right)$$
$$\left(-\left(\left((-3+m-n)\, n\, \text{AppellF1}\left[\frac{1}{2} (1-m+n),n,1-m,\frac{1}{2} (3-m+n),\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2,\right.\right.\right.\right.$$
$$\left.\left.-\text{Tan}\left[\frac{1}{2} (e+f x)\right]^2\right] \text{Csc}[e+f x]^{-1+m} \text{Sec}[e+f x]^2 \text{Tan}[e+f x]^{-1+n}\right)\Big/$$

$$\Big((-1+m-n)\Big((-3+m-n)\,\text{AppellF1}\Big[\frac{1}{2}(1-m+n),n,1-m,\frac{1}{2}(3-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]-2\Big((-1+m)\,\text{AppellF1}\Big[\frac{1}{2}(3-m+n),n,2-m,\frac{1}{2}(5-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]+n\,\text{AppellF1}\Big[\frac{1}{2}(3-m+n),1+n,1-m,\frac{1}{2}(5-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\Big)\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big)\Big)+$$

$$\Big((-1+m)(-3+m-n)\,\text{AppellF1}\Big[\frac{1}{2}(1-m+n),n,1-m,\frac{1}{2}(3-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\text{Cos}[e+fx]\,\text{Csc}[e+fx]^m\,\text{Tan}[e+fx]^n\Big)\Big/$$

$$\Big((-1+m-n)\Big((-3+m-n)\,\text{AppellF1}\Big[\frac{1}{2}(1-m+n),n,1-m,\frac{1}{2}(3-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]-2\Big((-1+m)\,\text{AppellF1}\Big[\frac{1}{2}(3-m+n),n,2-m,\frac{1}{2}(5-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]+n\,\text{AppellF1}\Big[\frac{1}{2}(3-m+n),1+n,1-m,\frac{1}{2}(5-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\Big)\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big)\Big)-$$

$$\Big((-3+m-n)\,\text{Csc}[e+fx]^{-1+m}\Big(-\frac{1}{3-m+n}(1-m)(1-m+n)\,\text{AppellF1}\Big[1+\frac{1}{2}(1-m+n),n,2-m,1+\frac{1}{2}(3-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\text{Sec}\Big[\frac{1}{2}(e+fx)\Big]^2\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]+\frac{1}{3-m+n}n(1-m+n)\,\text{AppellF1}\Big[1+\frac{1}{2}(1-m+n),1+n,1-m,1+\frac{1}{2}(3-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\text{Sec}\Big[\frac{1}{2}(e+fx)\Big]^2\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]\Big)\text{Tan}[e+fx]^n\Big)\Big/$$

$$\Big((-1+m-n)\Big((-3+m-n)\,\text{AppellF1}\Big[\frac{1}{2}(1-m+n),n,1-m,\frac{1}{2}(3-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]-2\Big((-1+m)\,\text{AppellF1}\Big[\frac{1}{2}(3-m+n),n,2-m,\frac{1}{2}(5-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]+n\,\text{AppellF1}\Big[\frac{1}{2}(3-m+n),1+n,1-m,\frac{1}{2}(5-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,-\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big]\Big)\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2\Big)\Big)+$$

$$\Big((-3+m-n)\,\text{AppellF1}\Big[\frac{1}{2}(1-m+n),n,1-m,\frac{1}{2}(3-m+n),\text{Tan}\Big[\frac{1}{2}(e+fx)\Big]^2,$$

$$-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\Big]\ \text{Csc}[e+f x]^{-1+m}$$

$$\Bigg(-2\left((-1+m)\ \text{AppellF1}\left[\frac{1}{2}(3-m+n),\ n,\ 2-m,\ \frac{1}{2}(5-m+n),\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+n\ \text{AppellF1}\left[\frac{1}{2}(3-m+n),\ 1+n,\ 1-m,\ \frac{1}{2}(5-m+n),\right.$$

$$\left.\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\right)\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+$$

$$(-3+m-n)\ \left(-\frac{1}{3-m+n}(1-m)\ (1-m+n)\ \text{AppellF1}\left[1+\frac{1}{2}(1-m+n),\ n,\right.\right.$$

$$\left.2-m,\ 1+\frac{1}{2}(3-m+n),\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{3-m+n}n\ (1-m+n)$$

$$\text{AppellF1}\left[1+\frac{1}{2}(1-m+n),\ 1+n,\ 1-m,\ 1+\frac{1}{2}(3-m+n),\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)-$$

$$2\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\left((-1+m)\ \left(-\frac{1}{5-m+n}(2-m)\ (3-m+n)\ \text{AppellF1}\left[1+\frac{1}{2}(3-m+n),\right.\right.\right.$$

$$\left.n,\ 3-m,\ 1+\frac{1}{2}(5-m+n),\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{5-m+n}n\ (3-m+n)$$

$$\text{AppellF1}\left[1+\frac{1}{2}(3-m+n),\ 1+n,\ 2-m,\ 1+\frac{1}{2}(5-m+n),\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)+n$$

$$\left(-\frac{1}{5-m+n}(1-m)\ (3-m+n)\ \text{AppellF1}\left[1+\frac{1}{2}(3-m+n),\ 1+n,\ 2-m,\right.\right.$$

$$\left.1+\frac{1}{2}(5-m+n),\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]$$

$$\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]+\frac{1}{5-m+n}(1+n)\ (3-m+n)$$

$$\text{AppellF1}\left[1+\frac{1}{2}(3-m+n),\ 2+n,\ 1-m,\ 1+\frac{1}{2}(5-m+n),\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.$$

$$\left.\left.\left.\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]\text{Sec}\left[\frac{1}{2}(e+f x)\right]^2\text{Tan}\left[\frac{1}{2}(e+f x)\right]\right)\right)\right)\text{Tan}[e+f x]^n\Bigg)\Big/$$

$$\Bigg((-1+m-n)\ \left((-3+m-n)\ \text{AppellF1}\left[\frac{1}{2}(1-m+n),\ n,\ 1-m,\ \frac{1}{2}(3-m+n),\right.\right.$$

$$\left.\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\ -\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]-$$

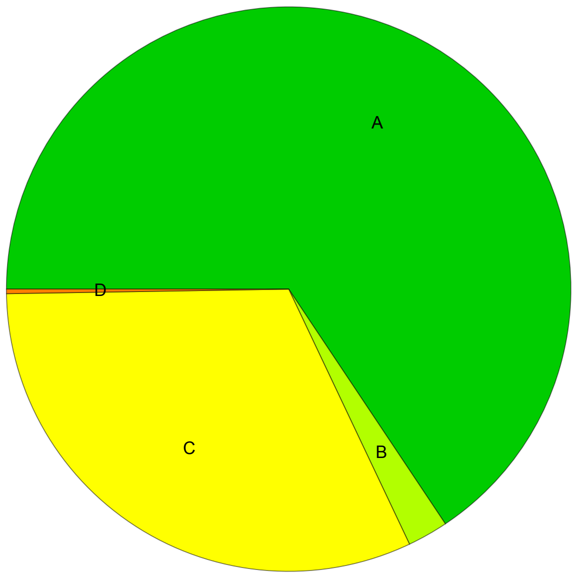
$$2\left((-1+m)\ \text{AppellF1}\left[\frac{1}{2}(3-m+n),\ n,\ 2-m,\ \frac{1}{2}(5-m+n),\ \text{Tan}\left[\frac{1}{2}(e+f x)\right]^2,\right.\right.$$

$$\left.-\text{Tan}\left[\frac{1}{2}(e+f x)\right]^2\right]+n\ \text{AppellF1}\left[\frac{1}{2}(3-m+n),\ 1+n,\ 1-m,\ \frac{1}{2}(5-m+n),\right.$$

$$\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2,\ -\text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\Big]\Big)\ \text{Tan}\left[\frac{1}{2}\left(e+f\,x\right)\right]^2\Big)^2\Big)\Big)\Big)\Big)$$

Summary of Integration Test Results

387 integration problems



A - 254 optimal antiderivatives

B - 9 more than twice size of optimal antiderivatives

C - 123 unnecessarily complex antiderivatives

D - 1 unable to integrate problems

E - 0 integration timeouts