

Integrale

$$D = \int \frac{x^2}{\sqrt{x^2 - 2x + 17}} dx$$

$$E = \int x^2 e^{-\delta + \gamma x} dx$$

$$F = \int \frac{x^2}{\sqrt{x^2 - 2x - 10}} dx$$

$$G = \int x^3 e^{-\delta + \gamma x} dx$$

$$H = \int \frac{3x + 1}{(x - 3)^3(x^2 - 2x + 5)} dx$$

$$I = \int \frac{2x + 5}{(x - 4)^3(x^2 - 2x + 5)} dx$$

$$J = \int \frac{6x + 3}{(x + 2)^2(x^2 - 2x + 37)} dx$$

$$K = \int (x + \cos(kx)) e^{-\gamma x} dx$$

$$L = \int \frac{x^2}{\sqrt{x^2 - 4x + 20}} dx$$

Ergebnisse:

$$D = \frac{1}{2}(x + 3)\sqrt{x^2 - 2x + 17} - 7 \operatorname{arsinh}\left(\frac{x-1}{4}\right) + C$$

$$E = \frac{1}{\gamma^3}(\gamma^2 x^2 - 2\gamma x + 2)e^{\gamma x - \delta} + C$$

$$F = \frac{1}{2}\sqrt{x^2 - 2x - 10}(x + 3) + \frac{13}{2} \ln(\sqrt{x^2 - 2x - 10} + x - 1) + C$$

$$G = \frac{1}{\gamma^4}(\gamma^3 x^3 - 3\gamma^2 x^2 + 6\gamma x - 6)e^{\gamma x - \delta} + C$$

$$H = \frac{1}{64}(\ln(x^2 - 2x + 5) + \frac{16}{x-3} - \frac{40}{(x-3)^2} - 2\ln(x-3) + 10\arctan(\frac{x-1}{2})) + C$$

$$I = \frac{1}{338}(-11\ln(x^2 - 2x + 5) + \frac{104}{x-4} - \frac{169}{(x-4)^2} + 22\ln(x-4) + 19\arctan(\frac{x-1}{2})) + C$$

$$J = \frac{1}{150}(-8\ln(x^2 - 2x + 37) + \frac{30}{x+2} + 16\ln(x+2) + 13\arctan(\frac{x-1}{6})) + C$$

$$K = \frac{e^{\gamma(-x)}}{\gamma^2(\gamma^2+k^2)}(-(\gamma^2+k^2)(\gamma x+1) + \gamma^3(-\cos(kx)) + \gamma^2 k \sin(kx)) + C$$

$$L = \frac{1}{2}(x+6)\sqrt{x^2-4x+20} - 4\operatorname{arsinh}(\frac{x-2}{4}) + C$$

Viel Spaß!!