! For an efficient use of these tables, first read `HowTo.pdf`.

T3.28C. Integrands involving algebraic functions of exponentials and powers of $(a+b\,x)$ on the interval (y,∞).

1. $$\int_y^\infty \frac{e^{-p^2x^2}}{x^{2n}}\,dx = \frac{(-1)^n 2^{n-1}p^{2n-1}\sqrt{\pi}}{(2n-1)!!}[1-\mathrm{erf}(py)] + \frac{e^{-p^2y^2}}{2y^{2n-1}}\sum_{k=0}^{n-1}\frac{(-1)^k 2^{k+1}(py)^{2k}}{(2n-1)(2n-3)\dots(2n-2k-1)}, \quad p>0.$$

2. $$\int_y^\infty e^{-\mu x^2}\frac{dx}{x^2} = \frac{1}{y}e^{-\mu y^2} - \sqrt{\mu\pi}\,[1-\mathrm{erf}(y\sqrt{\mu})], \quad |\arg\mu|<\frac{\pi}{2},\ y>0.$$

3. $$\int_y^\infty x^{\nu-1}(x-y)^{\mu-1}\,e^{\beta/x}\,dx = \mathrm{B}(1-\mu-\nu,\,\mu)y^{\mu+\nu-1}\,{}_1F_1\left(1-\mu-\nu;\,1-\nu;\,\frac{\beta}{y}\right), \quad 0<\Re\{\mu\}<\Re\{1-\nu\},\ y>0.$$

4. $$\int_y^\infty x^{-2\mu}(x-y)^{\mu-1}\,e^{\beta/x}\,dx = \sqrt{\frac{\pi}{y}}\,\beta^{1/2-\mu}\Gamma(\mu)\,\exp\left(\frac{\beta}{2y}\right)I_{\mu-1/2}\left(\frac{\beta}{2y}\right), \quad \Re\{\mu\}>0,\ y>0.$$

5. $$\int_y^\infty \frac{e^{-x^2}}{\sqrt{x^2-y^2/2}}\,\frac{dx}{x} = \frac{\pi}{2\sqrt{2}\,y}\left[1-\mathrm{erf}\left(\frac{y}{\sqrt{2}}\right)\right]^2, \quad y>0.$$

6. $$\int_{y\sqrt{2}}^\infty \frac{e^{-x^2}}{\sqrt{x^2-y^2}}\,\frac{dx}{x} = \frac{\pi}{4y}\,[1-\mathrm{erf}(y)]^2, \quad y>0.$$
