

C4282

! For an efficient use of these tables, first read [HowTo.pdf](#).

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T3.63A. Integrands involving arctan and hyperbolic functions on the interval $(-\infty, \infty)$.

$$1. \int_{-\infty}^{\infty} \frac{\arctan e^{-x}}{\cosh^{2q} px} dx = \frac{1}{2} \int_{-\infty}^{\infty} \frac{\Pi(x)}{\cosh^{2q} px} dx = \frac{\sqrt{\pi^3}}{4p} \frac{\Gamma(q)}{\Gamma\left(q + \frac{1}{2}\right)}, \quad q > 0.$$

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