

MATHEMATICAL TABLES

Some Definite Integrals

$$\int_0^{\infty} e^{-a^2 x^2} dx = \frac{\sqrt{\pi}}{2a} \text{ at } a > 0$$

$$\int_0^{\infty} x^2 e^{-a^2 x^2} dx = \frac{\sqrt{\pi}}{4a^3} \text{ at } a > 0$$

$$\int_0^{\infty} e^{-x} \ln x dx \approx -0.5772$$

$$\int_0^{\infty} \frac{(\cos ax)}{x} dx = \infty, (\infty - \text{any number})$$