

C4282

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

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T2.59A. Integrands involving product of trigonometric functions, exponentials and powers of x and $1/x$ on the interval $(0, y)$.

$$1. \int_0^y x^{\mu-1} e^{-\beta x} \sin \delta x \, dx = \frac{i}{2} (\beta + i\delta)^{-\mu} \gamma[\mu, (\beta + i\delta)y] - \frac{i}{2} (\beta - i\delta)^{-\mu} \gamma[\mu, (\beta - i\delta)y],$$

$$\Re\{\mu\} > -1.$$

$$2. \int_0^y x^{\mu-1} e^{-\beta x} \cos \delta x \, dx = \frac{1}{2} (\beta + i\delta)^{-\mu} \gamma[\mu, (\beta + i\delta)y] + \frac{1}{2} (\beta - i\delta)^{-\mu} \gamma[\mu, (\beta - i\delta)y],$$

$$\Re\{\mu\} > 0.$$

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