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

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**T3.60A.** Integrands involving logarithms, trigonometric functions and exponentials on the interval  $(0, \infty)$ .

$$1. \int_0^\infty e^{-qx} \sin px \ln x \, dx = \frac{1}{p^2 + q^2} \left[ q \arctan \frac{p}{q} - p \gamma_e - \frac{p}{2} \ln(p^2 - q^2) \right], \quad q > 0, \, p > 0.$$

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$$2. \int_0^\infty e^{-qx} \cos px \ln x \, dx = -\frac{1}{p^2 + q^2} \left[ \frac{q}{2} \ln(p^2 + q^2) + p \arctan \frac{p}{q} + q \gamma_e \right], \quad q > 0.$$

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