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

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**T2.48A.** Integrands involving trigonometric functions and powers of trigonometric functions with quadratic, cubic, biquadratic and  $p$ -th degree polynomials on the interval  $(0, 1)$  and  $(0, y)$ .

$$1. \int_0^1 \sin(ax^2) dx = \sqrt{\frac{\pi}{2a}} S(\sqrt{a}), \quad a > 0.$$

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$$2. \int_0^1 \cos(ax^2) dx = \sqrt{\frac{\pi}{2a}} C(\sqrt{a}), \quad a > 0.$$

$$3. \int_0^y \sin(a\sqrt{y^2 - x^2}) \cos bx dx = \frac{\pi ay}{2\sqrt{a^2 + b^2}} J_1\left(y\sqrt{a^2 + b^2}\right), \quad a > 0, b > 0, y > 0.$$

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