

C4282

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

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T2.27C. Integrands of the form $\sqrt{\frac{x^2 \pm b^2}{(a^2 \pm x^2)^n}}$ for $n = 1, 3$ on the intervals $(y, 1)$ and $(1, y)$.

$$1. \int_y^1 \frac{dx}{x^2} \sqrt{\frac{x^2 + 1}{1 - x^2}} = \sqrt{2} \left[F \left(\arccos y, \frac{\sqrt{2}}{2} \right) - E \left(\arccos y, \frac{\sqrt{2}}{2} \right) \right] + \frac{\sqrt{1 - y^4}}{y}, \quad y < 1.$$

$$2. \int_1^y \frac{dx}{x^2} \sqrt{\frac{x^2 + 1}{x^2 - 1}} = \sqrt{2} E \left(\arccos \frac{1}{y}, \frac{\sqrt{2}}{2} \right), \quad y > 1.$$

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