

C4282

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

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T2.39B. Integrands involving hyperbolic functions and algebraic functions on the interval $(0, 1)$.

$$1. \int_0^1 \sqrt{1-x^2} \cosh ax \, dx = \frac{\pi}{2a} I_1(a).$$

$$2. \int_0^1 \frac{\cosh ax}{\sqrt{1-x^2}} \, dx = \frac{\pi}{2} I_0(a).$$

$$3. \int_0^1 \frac{x}{\sqrt{\cosh 2a - \cosh 2ax}} \frac{dx}{\sinh ax} = \frac{\pi}{2\sqrt{2}a^2} \frac{\arcsin(\tanh a)}{\sinh a}, \quad a > 0.$$

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