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

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T2.46E. Integrands involving square roots of expressions containing trigonometric functions on the interval $(0, y)$.

$$1. \int_0^y \frac{\cos\left(n + \frac{1}{2}\right) x \, dx}{\sqrt{2(\cos x - \cos y)}} = \frac{\pi}{2} P_n(\cos y).$$

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$$2. \int_0^y \sqrt{\frac{\cos 2x - \cos 2y}{\cos 2x + 1}} \, dx = \frac{\pi}{2} (1 - \cos y), \quad y^2 < \frac{\pi^2}{4}.$$

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