

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

T3.35B. Integrands involving product and division of trigonometric functions by powers of $(a + bx)$ on the interval $(1, \infty)$.

$$1. \int_1^\infty \frac{\sin(ax)}{x^{2n}} dx = \frac{a^{2n-1}}{(2n-1)!} \left[\sum_{k=1}^{2n-1} \frac{(2n-k-1)!}{a^{2n-k}} \sin\left(a + (k-1)\frac{\pi}{2}\right) + (-1)^n \operatorname{Ci}(a) \right], \quad a > 0.$$

$$2. \int_1^\infty \frac{\cos(ax)}{x^{2n+1}} dx = \frac{a^{2n}}{(2n)!} \left[\sum_{k=1}^{2n} \frac{(2n-k)!}{a^{2n-k+1}} \cos\left(a + (k-1)\frac{\pi}{2}\right) + (-1)^{n+1} \operatorname{Ci}(a) \right], \quad a > 0.$$
