

FORMULA 3.812.1

$$\begin{aligned}\int_0^\pi \frac{x \sin x \, dx}{a + b \cos^2 x} &= \frac{\pi}{\sqrt{ab}} \arctan \sqrt{\frac{b}{a}} \quad a > 0, b > 0 \\ &= \frac{\pi}{2\sqrt{-ab}} \ln \frac{\sqrt{a} + \sqrt{-b}}{\sqrt{a} - \sqrt{-b}} \quad a > -b > 0\end{aligned}$$