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

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T2.69F. Integrands involving logarithm functions and powers of logarithm functions and rational functions on the interval $(0, \pi)$.

$$1. \int_0^{\pi} x \ln \sin x \, dx = \frac{1}{2} \int_0^{\pi} x \ln \cos^2 x \, dx = -\frac{\pi^2}{2} \ln 2.$$

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$$2. \int_0^{\pi} x \ln \tan^2 x \, dx = 0.$$

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