

Calculus Study Guide: 8.1

Calculate the arc length of the function on the given interval.

$$y = \ln(\sin x), [\pi/6, \pi/3]$$

$$\frac{dy}{dx} = \frac{1}{\sin x} \cdot \cos x = \cot x$$

$$\int_{\pi/6}^{\pi/3} \sqrt{1 + \cot^2 x} = 0.767$$

arc length: \_\_\_\_\_