

$$\sin \frac{5\pi}{3}$$

$$= \sin \left(2\pi - \frac{\pi}{3} \right)$$

$$= -\sin \frac{\pi}{3}$$

$$= -\frac{\sqrt{3}}{2}$$

↑
Related
Angles

$$= \sin \left(\frac{3\pi}{2} + \frac{\pi}{6} \right)$$

$$= -\cos \frac{\pi}{6}$$

$$= -\frac{\sqrt{3}}{2}$$

↑
CoRelated
Angles

↑
Compound
Angles

$$= \sin \left(\frac{4\pi}{3} + \frac{\pi}{2} \right)$$

$$= \sin \frac{4\pi}{3} \cos \frac{\pi}{2} + \sin \frac{\pi}{2} \cos \frac{4\pi}{3}$$

$$= \left(\sin \frac{4\pi}{3} \right) \cos \frac{\pi}{2} + \sin \frac{\pi}{2} \left(-\cos \frac{\pi}{3} \right)$$

$$= -\frac{\sqrt{3}}{2} \left(\frac{1}{2} \right) - \frac{\sqrt{3}}{2} \left(\frac{1}{2} \right)$$

$$= -\frac{\sqrt{3} - \sqrt{3}}{4}$$

$$= -\frac{2\sqrt{3}}{4^2}$$

$$= -\frac{\sqrt{3}}{2}$$