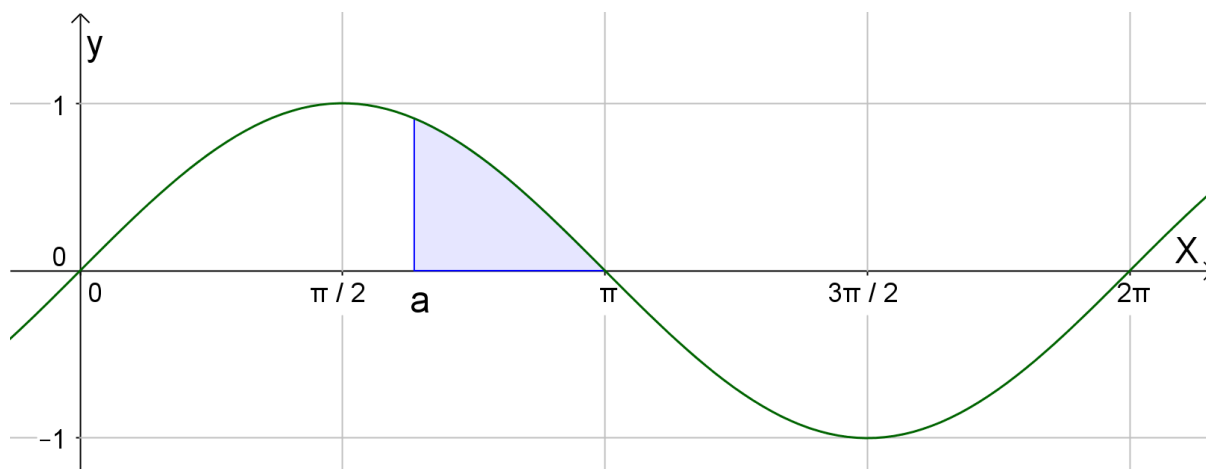


## Exam-style Question – Area between Graphs



$$\begin{aligned}\text{Area} &= \int_a^{\pi} \sin x \, dx \\ &= [-\cos x]_a^{\pi} \\ &= [-\cos \pi] - [-\cos a] \\ &= 1 + \cos a\end{aligned}$$

$$1 - \frac{\sqrt{3}}{2} = 1 + \cos a$$

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

$$a = \frac{5\pi}{6}$$