

Convert the angle to degrees:

$$\frac{3\pi}{4} = \frac{3\pi}{4} \cdot \frac{180^\circ}{\pi} = \frac{540^\circ}{4} = 135^\circ$$

This is in the second quadrant and its reference angle is 45° . It intersects the unit circle at the point $\left(-\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$.

The value of cosine is the x-coordinate:

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