

The graph of cosine has a repeating hill and valley pattern. The pattern repeats after intervals of length  $2\pi$  in both directions. In particular:

$$\frac{\sqrt{2}}{2} = \cos\left(\frac{7\pi}{4}\right) = \cos\left(\frac{7\pi}{4} - 2\pi\right) = \cos\left(-\frac{\pi}{4}\right)$$

Therefore, the point  $\left(-\frac{\pi}{4}, \frac{\sqrt{2}}{2}\right)$  is on the graph of cosine. Because  $y = \cos\theta$  is symmetric about the  $y$ -axis, the

point  $\left(\frac{\pi}{4}, \frac{\sqrt{2}}{2}\right)$  is also on the graph.