

KEY

**Evaluating using the Unit Circle – HOMEWORK**

**Evaluate the following trigonometric function:**

<sup>y</sup>  
 $\sin 210^\circ = -\frac{1}{2}$   
30

<sup>x</sup>  
 $\cos 330^\circ = \frac{\sqrt{3}}{2}$   
30

<sup>y</sup>  
 $\sin(-60^\circ) = -\frac{\sqrt{3}}{2}$   
60

<sup>x</sup>  
 $\cos 420^\circ = \frac{1}{2}$   
60

<sup>y</sup>  
 $\sin 225^\circ = -\frac{\sqrt{2}}{2}$   
45

<sup>y</sup>  
 $\sin(-120^\circ) = -\frac{\sqrt{3}}{2}$   
60

<sup>x</sup>  
 $\cos 2\pi = 1$

<sup>x</sup>  
 $\cos \frac{7\pi}{3} = \frac{1}{2}$   
 $\frac{\pi}{3}$

<sup>y</sup>  
 $\sin \frac{\pi}{2} = 1$

$$\overset{y}{\sin} \frac{7\pi}{4} = -\frac{\sqrt{2}}{2}$$

$$\overset{x}{\cos} \frac{7\pi}{6} = -\frac{\sqrt{3}}{2}$$

$$\overset{x}{\cos} \frac{2\pi}{3} = \frac{1}{2}$$

$$\overset{y}{\sin} \left(-\frac{\pi}{4}\right) = -\frac{\sqrt{2}}{2}$$

$$\overset{y}{\sin} \frac{5\pi}{6} = \frac{1}{2}$$

**Find a positive angle  $\theta$ , in degrees, that satisfies the given equation:**

$$\overset{y}{\sin} \theta = \frac{\sqrt{2}}{2} \quad 45^\circ \text{ and } 135^\circ$$

$$\overset{x}{\cos} \theta = \frac{1}{2} \quad 60^\circ \text{ or } 300^\circ$$

$$\overset{x}{\cos} \theta = -\frac{\sqrt{3}}{2} \quad 150^\circ \text{ or } 210^\circ$$

$$\overset{x}{\cos} \theta = -\frac{\sqrt{2}}{2} \quad 135^\circ \text{ or } 225^\circ$$

$$\overset{y}{\sin} \theta = 0 \quad 0, 180^\circ, 360^\circ$$

$$\overset{x}{\cos} \theta = 1 \quad 0^\circ \text{ or } 360^\circ$$