

**DEGREES-RADIANS CONVERSIONS**

1. Rewrite each angle in radian measure, for  $0 \leq \theta \leq 2\pi$ . Leave answers in terms of  $\pi$  and in reduced fraction form. [Hint: multiply degrees by  $\frac{\pi}{180^\circ}$ ]

a.  $30^\circ =$

g.  $200^\circ =$

b.  $45^\circ =$

h.  $115^\circ =$

c.  $60^\circ =$

i.  $212^\circ =$

d.  $90^\circ =$

j.  $308^\circ =$

e.  $110^\circ =$

k.  $320^\circ =$

f.  $125^\circ =$

l.  $245^\circ =$

2. Rewrite each angle in degree measure. [Hint: multiply radians by  $\frac{180^\circ}{\pi}$ ]

a.  $\frac{7\pi}{2} =$

e.  $\frac{7\pi}{10} =$

b.  $\frac{11\pi}{4} =$

f.  $\frac{13\pi}{12} =$

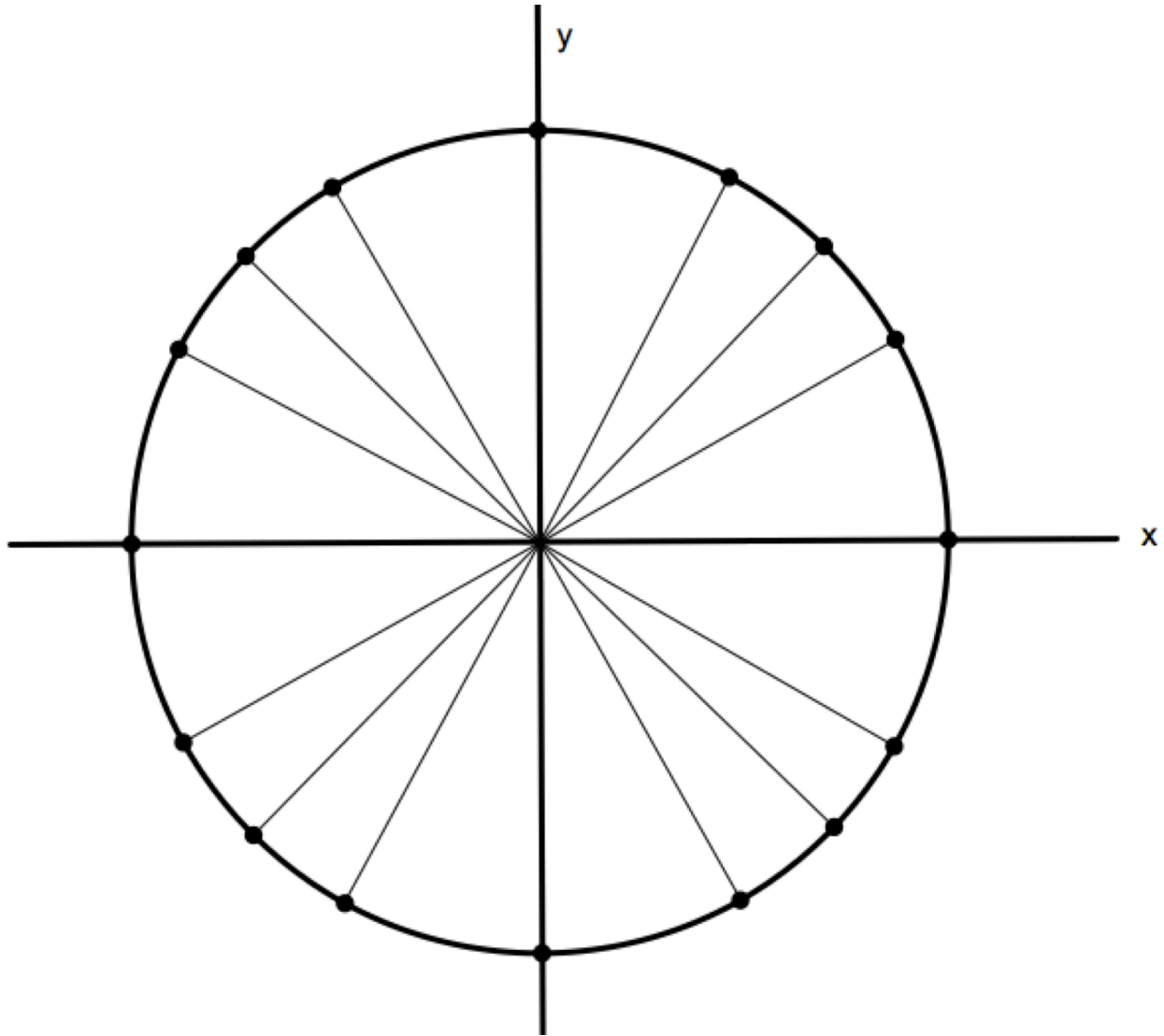
c.  $\frac{5\pi}{8} =$

g.  $\frac{11\pi}{8} =$

d.  $9\pi =$

h.  $\frac{2\pi}{9} =$

3. Complete the unit circle below. Label the radians, degrees, and coordinate points for each point on the unit circle.



4. Using the unit circle from above, determine the exact value of each trig function. Remember:  $\sin(\theta)$  yields the “y” value of the coordinate points associated with the angle &  $\cos(\theta)$  yields the “x” value of the coordinate points associated with the angle.

a.  $\sin\left(\frac{5\pi}{3}\right) = \underline{\hspace{2cm}}$

f.  $\cos\left(\frac{\pi}{2}\right) = \underline{\hspace{2cm}}$

b.  $\sin\left(\frac{3\pi}{2}\right) = \underline{\hspace{2cm}}$

g.  $\sin\left(\frac{7\pi}{4}\right) = \underline{\hspace{2cm}}$

c.  $\cos\left(\frac{7\pi}{6}\right) = \underline{\hspace{2cm}}$

h.  $\cos\left(\frac{2\pi}{3}\right) = \underline{\hspace{2cm}}$

d.  $\cos(\pi) = \underline{\hspace{2cm}}$

i.  $\sin(0) = \underline{\hspace{2cm}}$

e.  $\sin\left(\frac{5\pi}{4}\right) = \underline{\hspace{2cm}}$

j.  $\sin\left(-\frac{\pi}{6}\right) = \underline{\hspace{2cm}}$