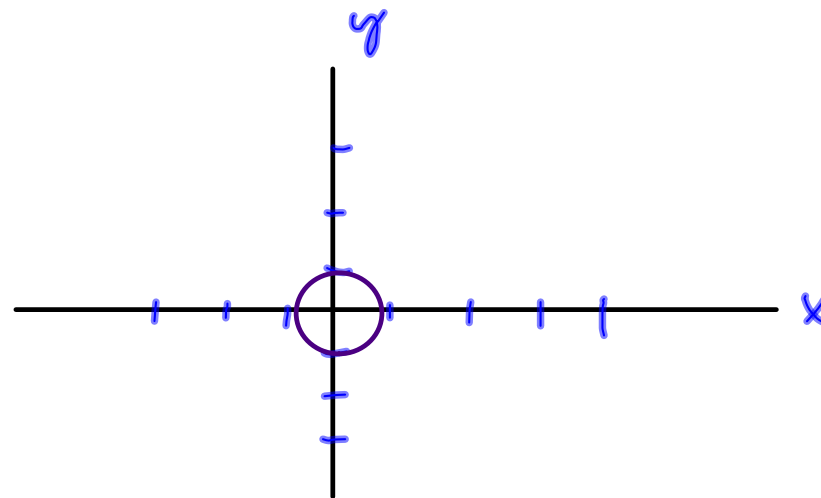
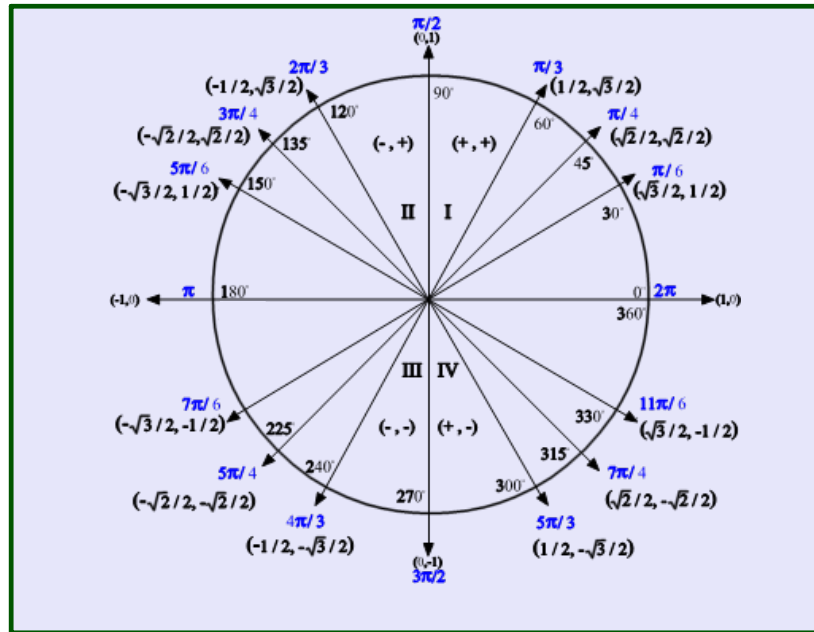
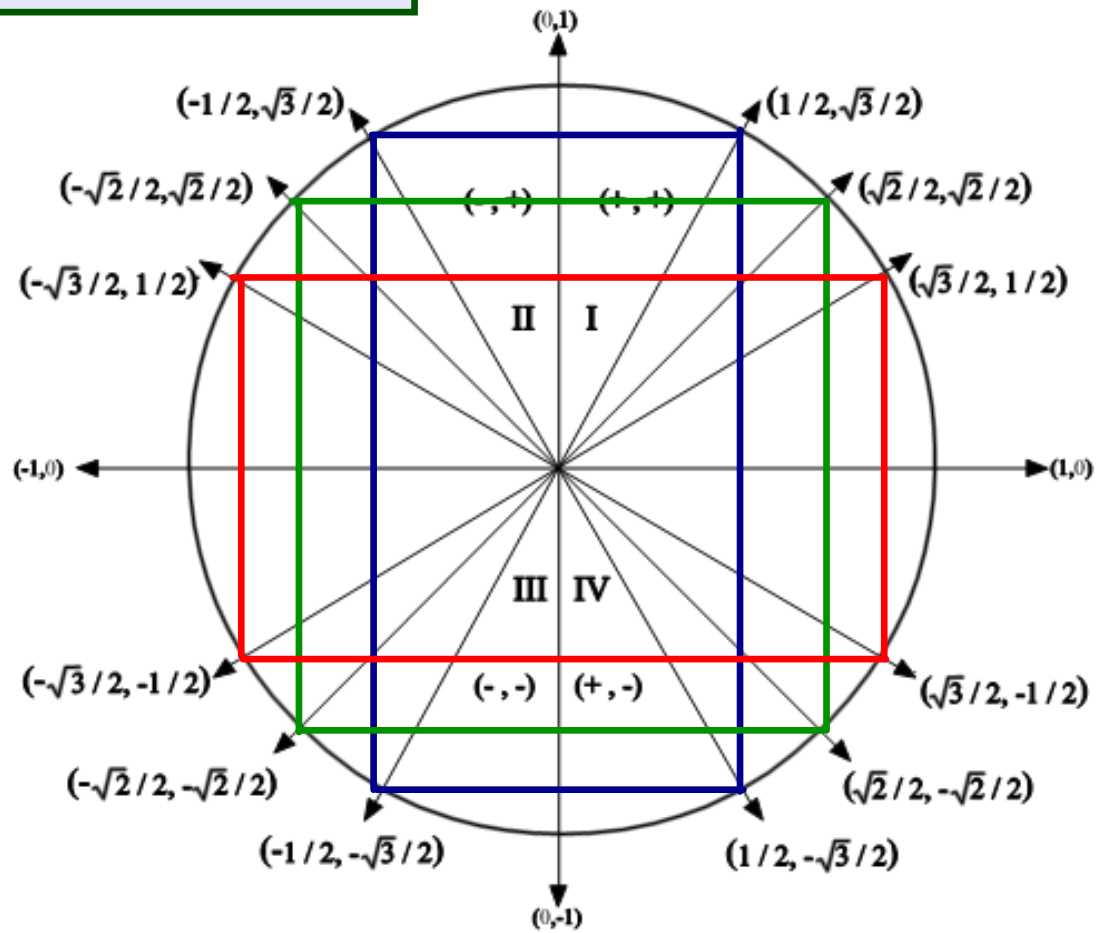


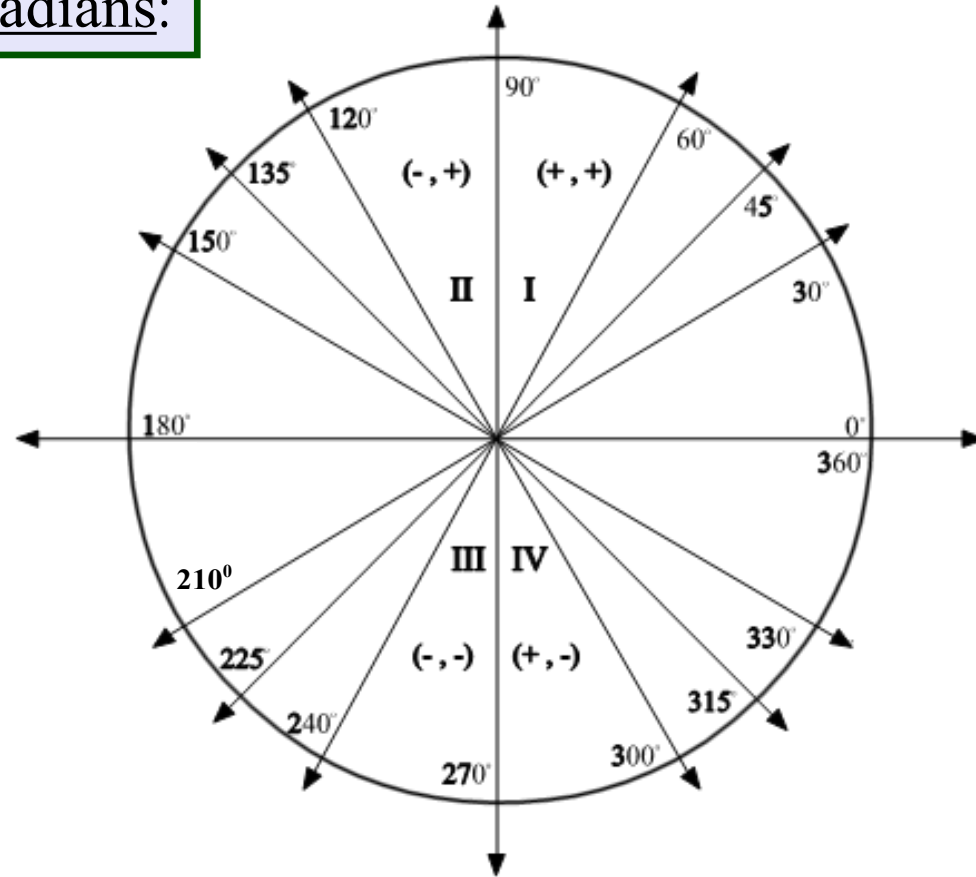
4.3 Trig Functions on the Unit Circle



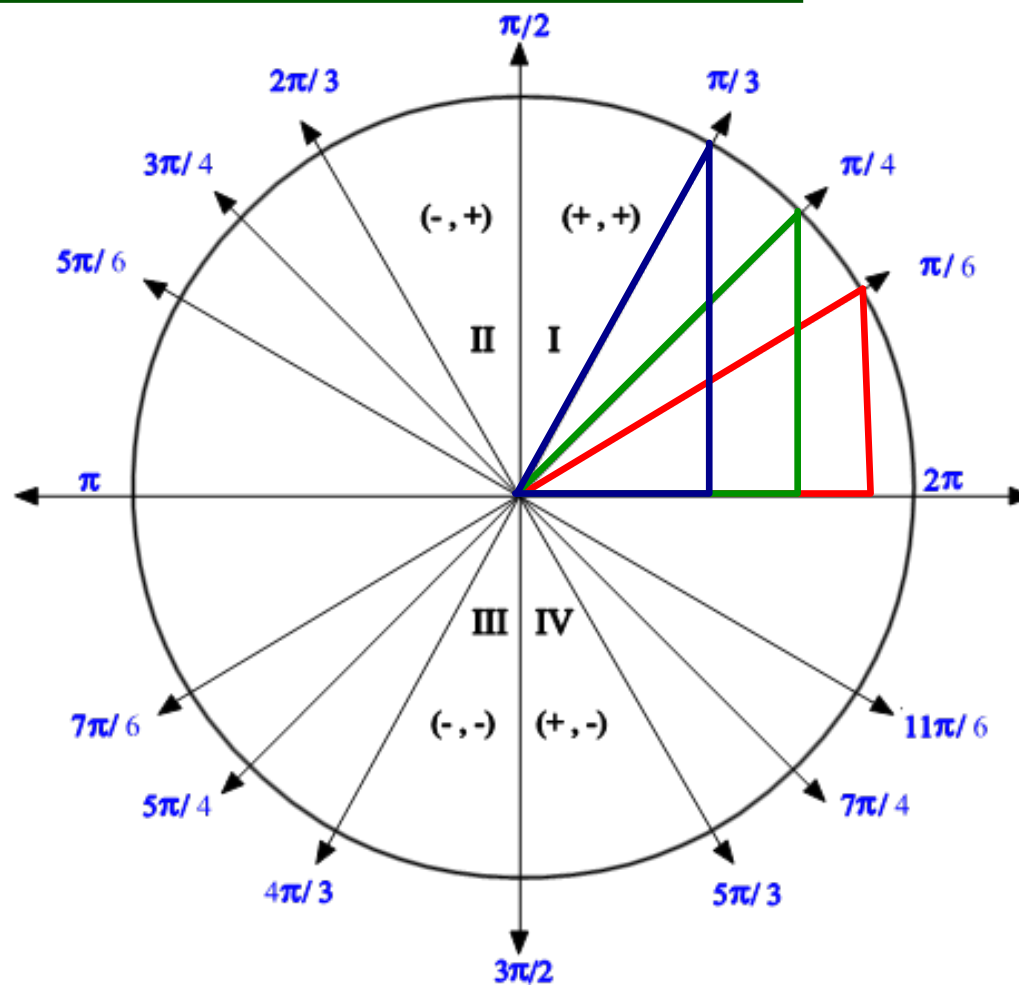
Note the Reflections:



Convert Each Angle to Radians:



Derive the Coordinates of Each Point:



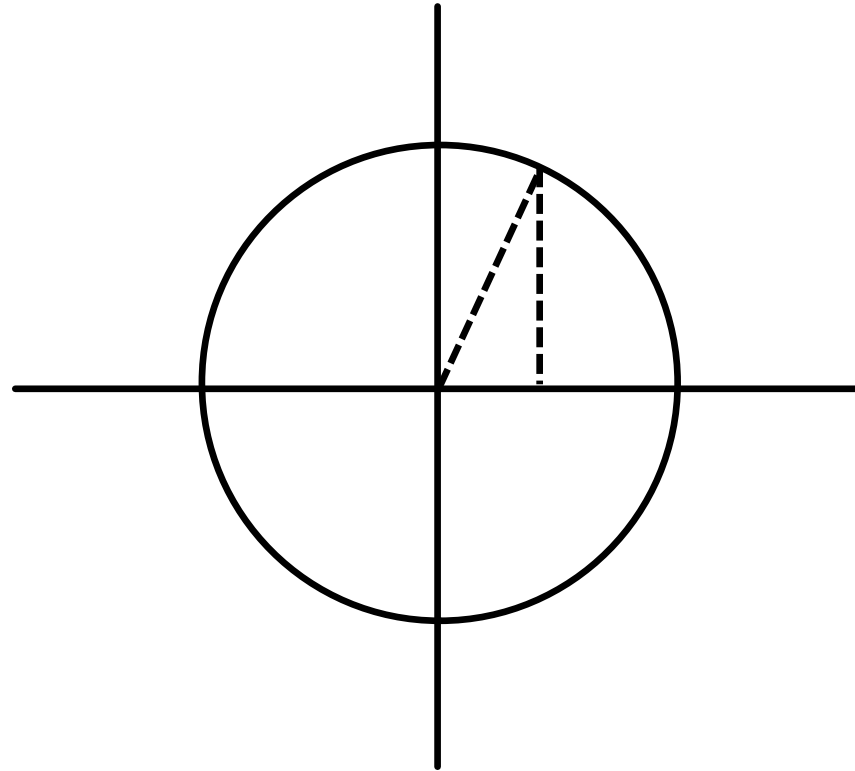
4.3 Trig Functions on the Unit Circle.notebook

When a point $P = (x, y)$ is on the Unit Circle that corresponds to angle theta:

$$\sin \theta = y \qquad \csc \theta = \frac{1}{y}$$

$$\cos \theta = x \qquad \sec \theta = \frac{1}{x}$$

$$\tan \theta = \frac{y}{x} \qquad \cot \theta = \frac{x}{y}$$

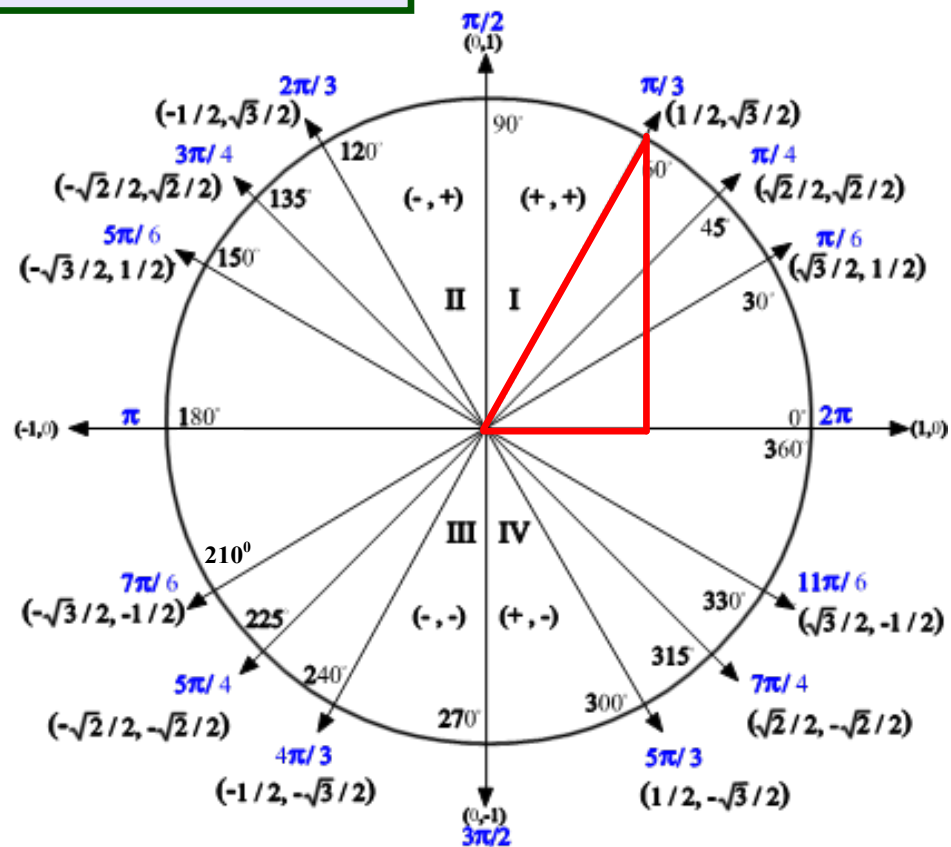


4.3 Trig Functions on the Unit Circle.notebook

Find the exact value of all 6 trig. functions
for the following angles:

1. $\theta = \frac{\pi}{3}$

2. $\theta = \frac{5\pi}{6}$



Find the Exact Value:

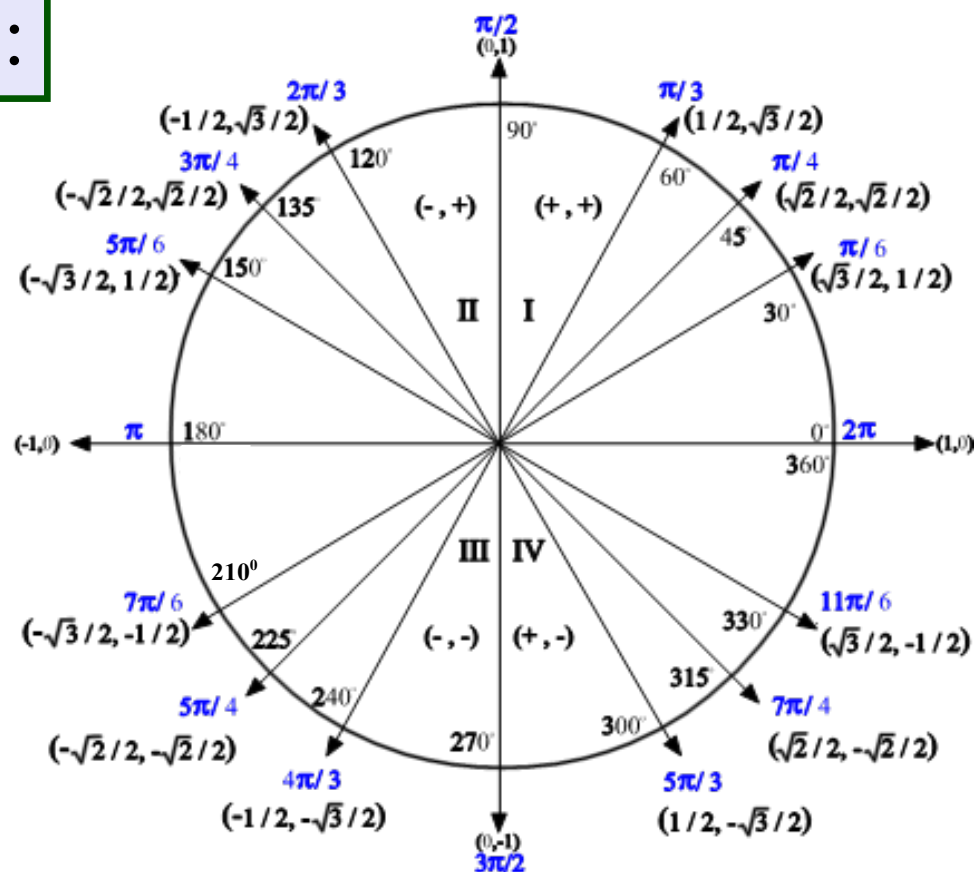
$$\cos \frac{-5\pi}{4} = \underline{\hspace{2cm}}$$

$$\cos \frac{-5\pi}{2} = \underline{\hspace{2cm}}$$

$$\cos \frac{-\pi}{4} = \underline{\hspace{2cm}}$$

$$\cos \frac{-3\pi}{4} = \underline{\hspace{2cm}}$$

$$\cos \frac{-\pi}{3} = \underline{\hspace{2cm}}$$



Find the Exact Value:

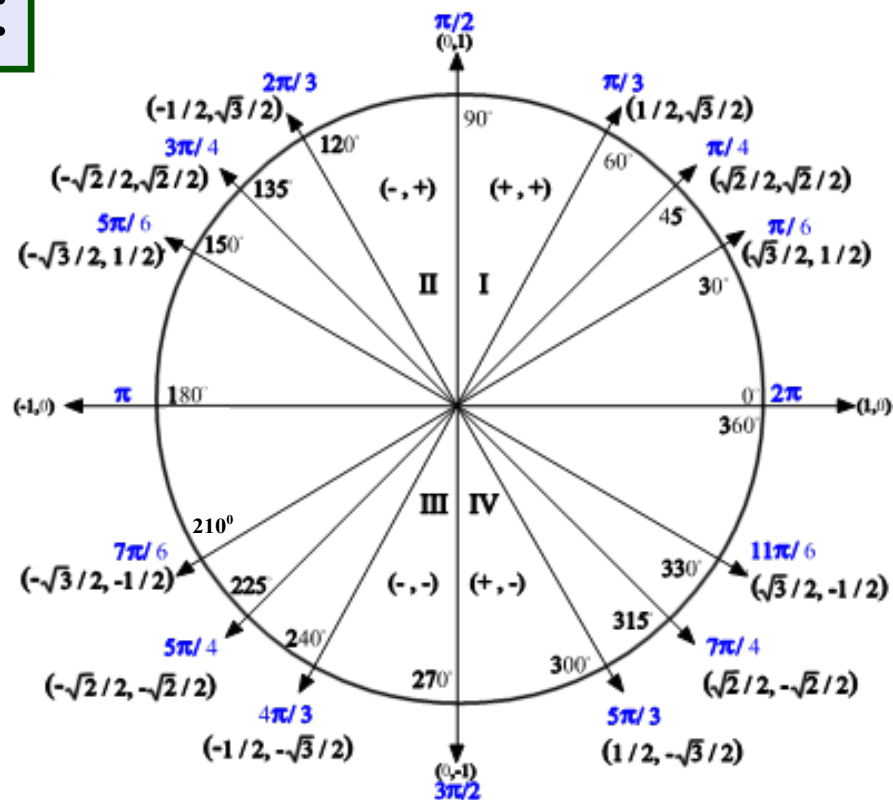
$$\sin \frac{7\pi}{6} = \underline{\hspace{2cm}}$$

$$\sin \frac{5\pi}{3} = \underline{\hspace{2cm}}$$

$$\sin \frac{3\pi}{4} = \underline{\hspace{2cm}}$$

$$\sin \frac{7\pi}{3} = \underline{\hspace{2cm}}$$

$$\sin \frac{13\pi}{2} = \underline{\hspace{2cm}}$$



Find the Exact Value:

$$\tan \frac{11\pi}{6} = \underline{\hspace{2cm}}$$

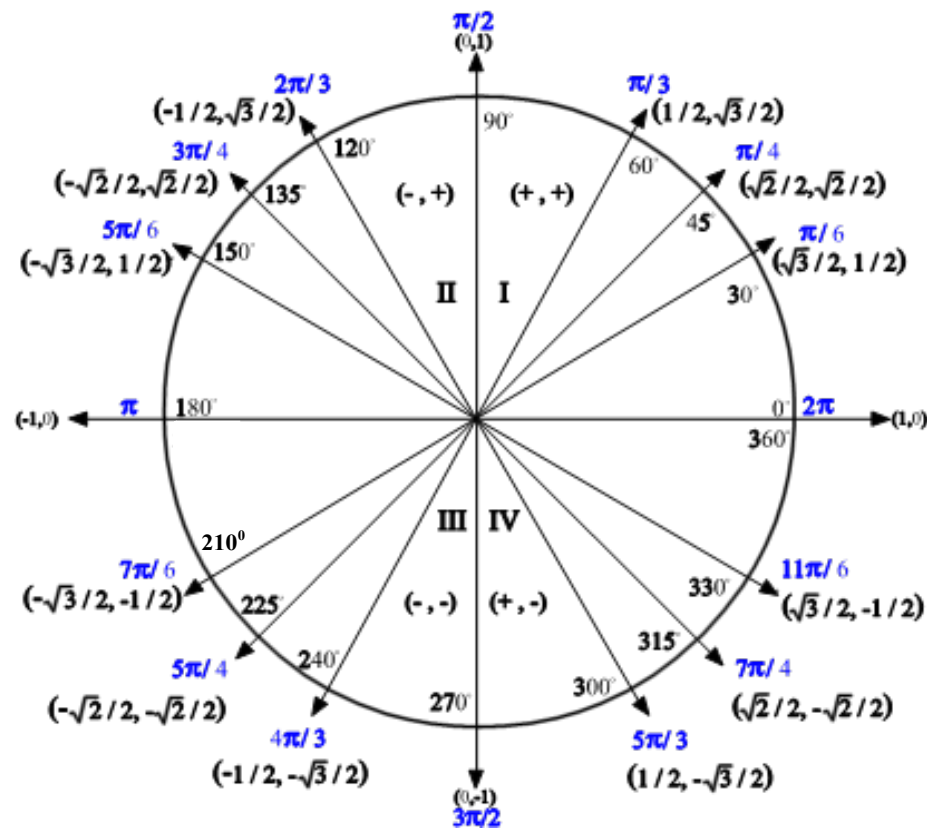
$$\tan \frac{4\pi}{3} = \underline{\hspace{2cm}}$$

$$\tan \frac{8\pi}{3} = \underline{\hspace{2cm}}$$

$$\tan \frac{5\pi}{6} = \underline{\hspace{2cm}}$$

$$\tan \frac{\pi}{4} = \underline{\hspace{2cm}}$$

$$\tan \frac{7\pi}{4} = \underline{\hspace{2cm}}$$



Find the Exact Value:

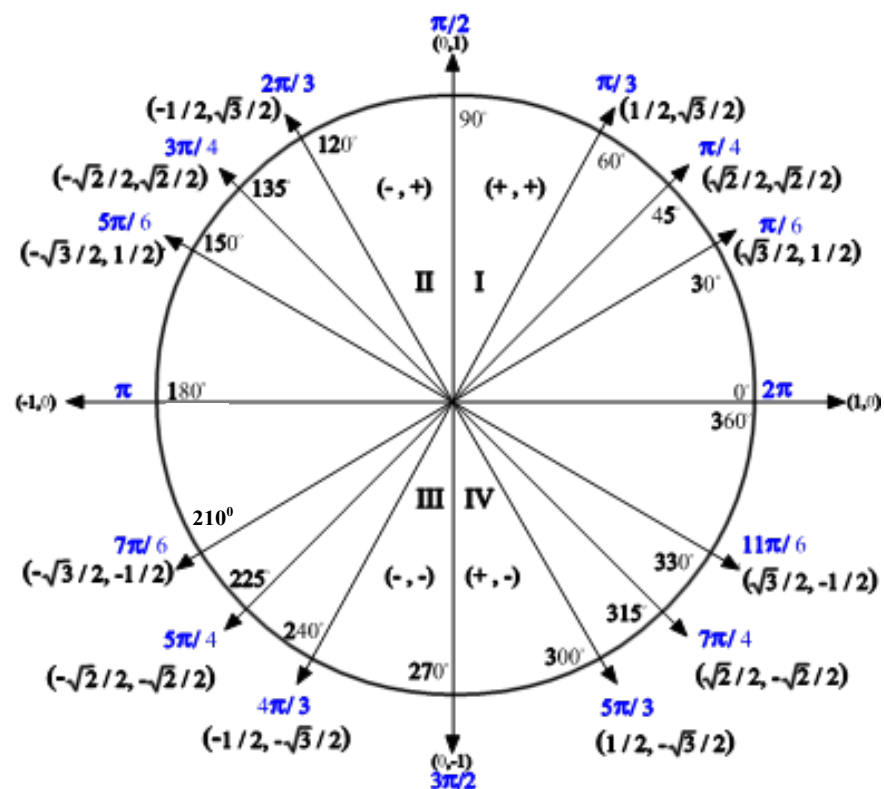
$$\sec \frac{-5\pi}{4} = \underline{\hspace{2cm}}$$

$$\csc \frac{-5\pi}{2} = \underline{\hspace{2cm}}$$

$$\cot \frac{-\pi}{4} = \underline{\hspace{2cm}}$$

$$\cot \frac{-3\pi}{4} = \underline{\hspace{2cm}}$$

$$\sec \frac{-\pi}{3} = \underline{\hspace{2cm}}$$



4.3 Trig Functions on the Unit Circle.notebook

Assignment:

Unit Circle Practice (1-21)