

Radians & Degrees

Converting degrees to radians:

$$\frac{45^\circ}{1} \cdot \frac{\pi}{180^\circ} = \boxed{\frac{\pi}{4}}$$

Converting radians to degrees:

$$\frac{2\pi}{3} \cdot \frac{180^\circ}{\pi} = \boxed{120^\circ}$$

Complement of an angle in degrees:

$$90^\circ - \theta$$

Complement of an angle in radians:

$$\frac{\pi}{2} - \theta$$

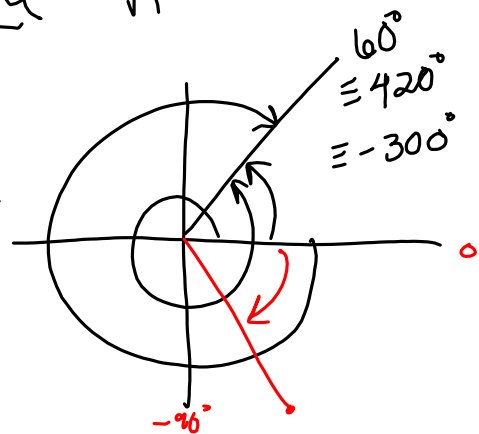
Supplement of an angle in degrees:

$$180^\circ - \theta$$

Supplement of an angle in radians:

$$\pi - \theta$$

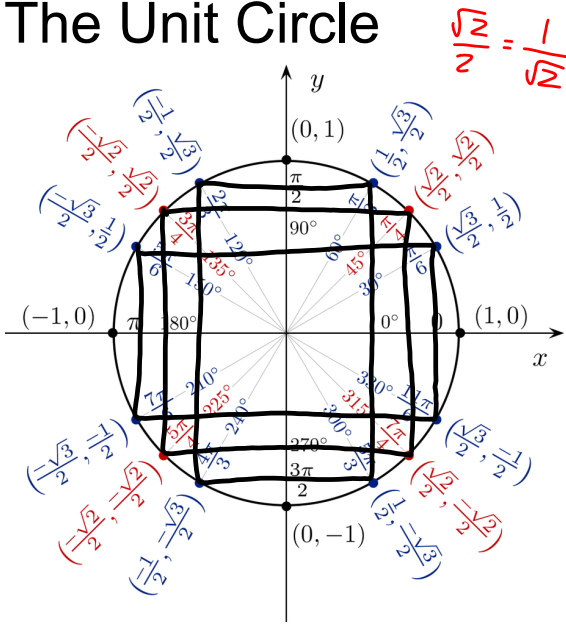
Two angles are coterminal if they differ by integer multiples of 360° or 2π



$$-8000^\circ + 7200^\circ = -800^\circ$$

$$+ 720^\circ = -80^\circ$$

The Unit Circle



Common angles:
(memorize!)

$$\frac{\pi}{6} = 30^\circ$$

$$\frac{\pi}{4} = 45^\circ$$

$$\frac{\pi}{3} = 60^\circ$$

Note:

$$\frac{k\pi}{6} \rightarrow 30^\circ \text{ ref. } \angle$$

$$\frac{k\pi}{4} \rightarrow 45^\circ \text{ ref. } \angle$$

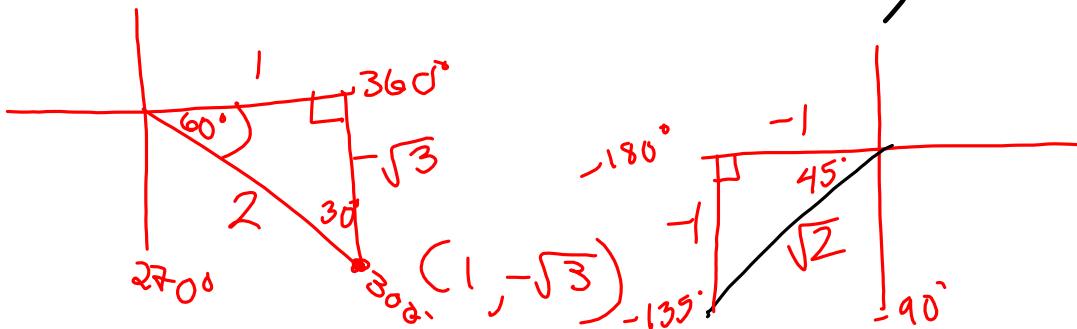
$$\frac{k\pi}{3} \rightarrow 60^\circ \text{ ref. } \angle$$

$$\frac{k\pi}{2} \rightarrow 90^\circ \text{ or } 270^\circ$$

$k\pi \rightarrow 0^\circ$ for k even;
 180° for k odd

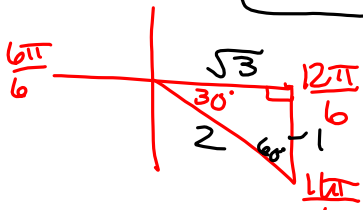
Find the trig function value of the given angle

$$\tan 300^\circ = \boxed{-\sqrt{3}} \quad \sec(-135^\circ) = \boxed{-\sqrt{2}}$$

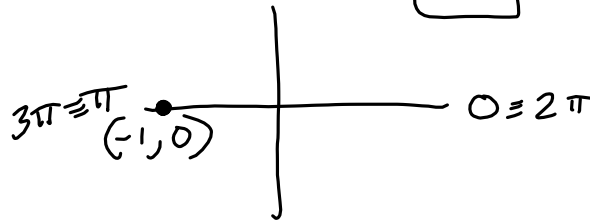


Evaluate the trigonometric function of an angle given in radians

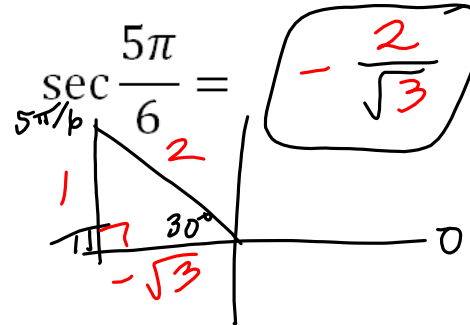
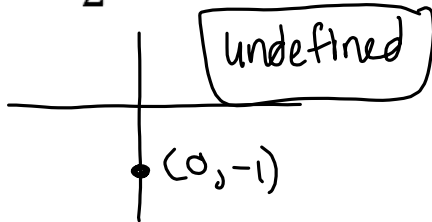
$$\cos \frac{11\pi}{6} = \boxed{\frac{\sqrt{3}}{2}}$$



$$\sin 329\pi = \boxed{0}$$



$$\tan \frac{7\pi}{2} = \frac{\sin \frac{7\pi}{2}}{\cos \frac{7\pi}{2}} = \frac{-1}{0}$$



6.3 # 41-71 odd

6.5 # 7-24 all