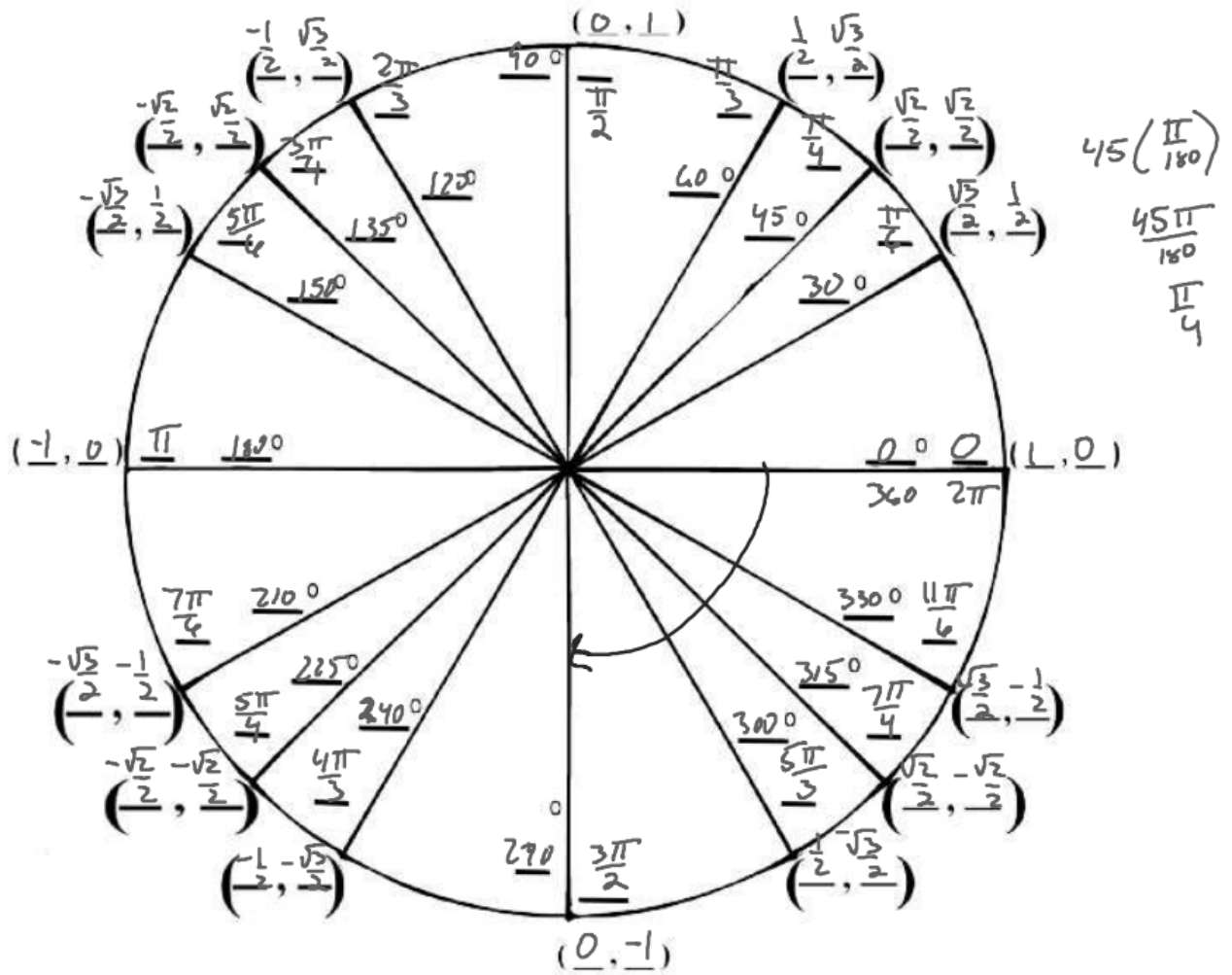


Unit Circle, Fill in the blank



$$\text{Radians} = \text{Degree} \left(\frac{\pi}{180} \right)$$

$$30 \left(\frac{\pi}{180} \right) = \frac{30\pi}{180} = \frac{\pi}{6}$$

$$\cos \theta = \frac{x}{r} = \cos \theta = x$$

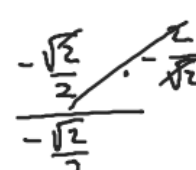
$$\sin \theta = \frac{y}{r} = \sin \theta = y$$

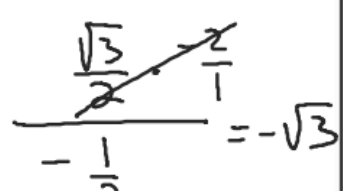
$$\tan \theta = \frac{y}{x} = \frac{\sin \theta}{\cos \theta}$$

Evaluate without using a calculator by using ratios in a reference triangle.

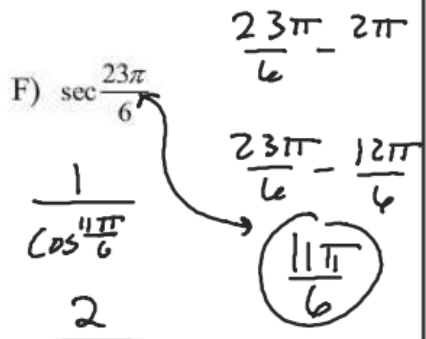
$$\text{A) } \sin 120^\circ = \frac{\sqrt{3}}{2}$$

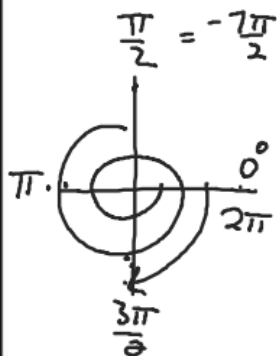
$$\text{B) } \cos \frac{2\pi}{3} = -\frac{1}{2}$$

$$\text{C) } \tan \frac{13\pi}{4} = \frac{-\frac{\sqrt{2}}{2}}{-\frac{\sqrt{2}}{2}} = 1$$


$$\text{D) } \cot \frac{-13\pi}{6} = \frac{\cos \theta}{\sin \theta} = \frac{\frac{\sqrt{3}}{2}}{-\frac{1}{2}} = -\sqrt{3}$$


$$\text{E) } \csc \frac{7\pi}{4} = \frac{1}{\sin \frac{7\pi}{4}} = -\frac{2}{\sqrt{2}}$$

$$\text{F) } \sec \frac{23\pi}{6} = \frac{1}{\cos \frac{11\pi}{6}} = \frac{2}{\sqrt{3}}$$




Find sine, cosine, and tangent for the given angle.

A) 90° $\sin 90^\circ = 1$
 $\cos 90^\circ = 0$
 $\tan 90^\circ = \text{und}$

B) $-\frac{\pi}{2}$

$\sin^{-\frac{\pi}{2}} = -1$

$\cos^{-\frac{\pi}{2}} = 0$

$\tan^{-\frac{\pi}{2}} = \text{und.}$

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

$-\frac{\pi}{2} + \frac{4\pi}{2}$

$\frac{3\pi}{2}$

C) 6π $\sin 6\pi = 0$
 $\cos 6\pi = 1$
 $\tan 6\pi = 0$

D) $-\frac{7\pi}{2}$

$-\frac{7\pi}{2} + 2\pi$

$\sin^{-\frac{7\pi}{2}} = 1$ $-\frac{7\pi}{2} + \frac{4\pi}{2}$

$\cos^{-\frac{7\pi}{2}} = 0$ $-\frac{3\pi}{2}$

$\tan^{-\frac{7\pi}{2}} = \text{und.}$

Evaluate without using a calculator

S	A
T	C

A) Find $\sin \theta$ and $\tan \theta$ if $\cos \theta = \frac{3}{4}$ and $\cot \theta < 0$

$3^2 + y^2 = 4^2$

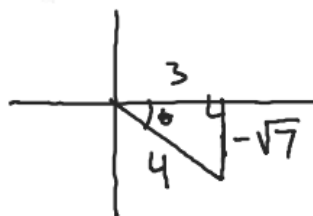
$9 + y^2 = 16$

$y^2 = 7$

$y = \sqrt{7}$

$\sin \theta = -\frac{\sqrt{7}}{4}$

$\tan \theta = -\frac{\sqrt{7}}{3}$



B) Find $\sec \theta$ and $\csc \theta$ if $\cot \theta = -\frac{6}{5}$ and $\sin \theta > 0$

$\csc \theta = \frac{\sqrt{61}}{5}$

$\sec \theta = \frac{\sqrt{61}}{-6}$

