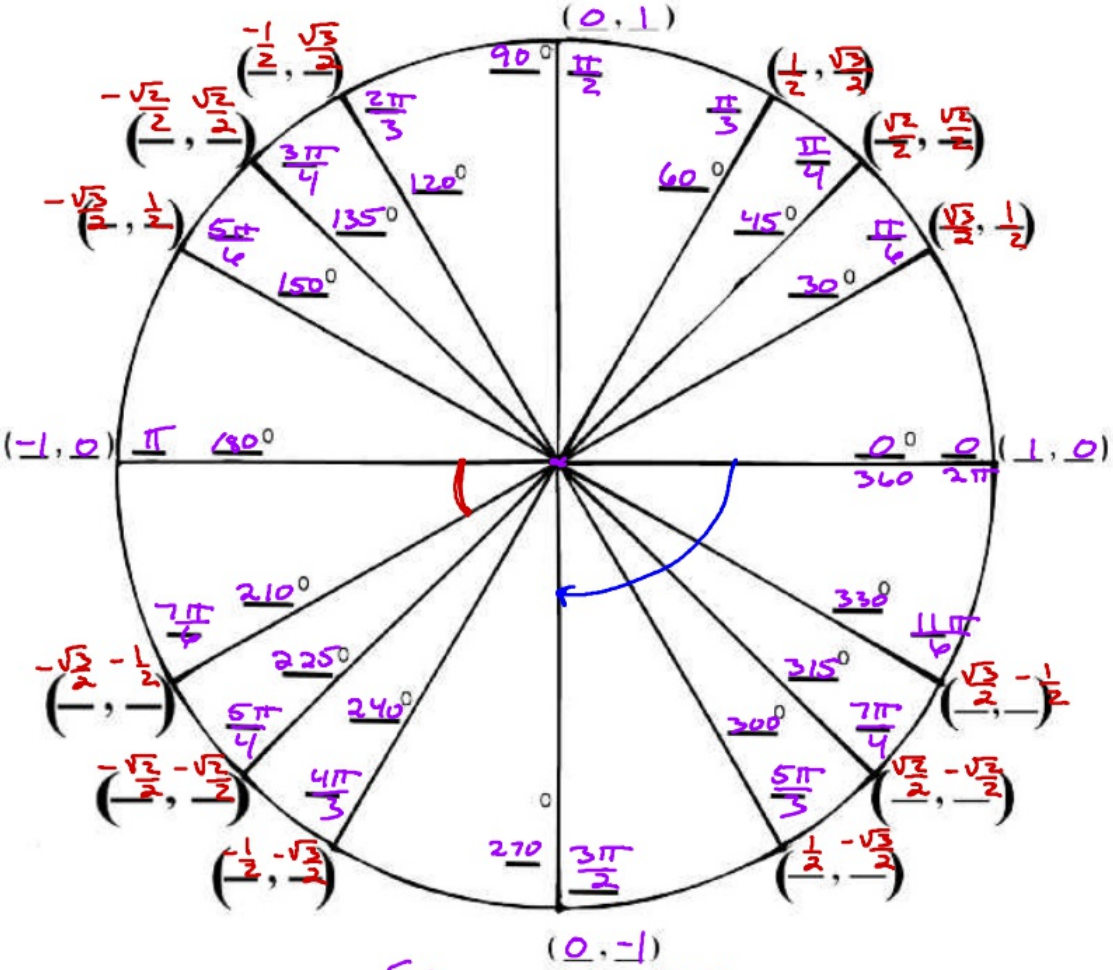
Unit Circle, Fill in the blank



	Sin	cos
30	$\sqrt{\frac{1}{2}} = \frac{1}{2}$	$\sqrt{\frac{3}{2}} = \frac{\sqrt{3}}{2}$
45	$\sqrt{\frac{2}{2}} = \frac{\sqrt{2}}{2}$	$\sqrt{\frac{2}{2}} = \frac{\sqrt{2}}{2}$
60	$\sqrt{\frac{3}{2}} = \frac{\sqrt{3}}{2}$	$\sqrt{\frac{1}{2}} = \frac{1}{2}$

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

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

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

$\frac{8\pi}{4}$

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

$= \frac{\sin\theta}{\cos\theta}$

C) $\tan\frac{13\pi}{4} = \frac{y}{x} = \frac{-\frac{\sqrt{2}}{2}}{-\frac{\sqrt{2}}{2}}$

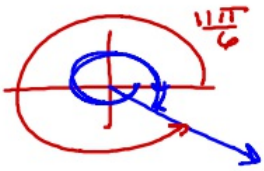
$\frac{13\pi}{4} - \frac{8\pi}{4}$

$\frac{5\pi}{4}$

$= 1$

D) $\cot\frac{-13\pi}{6}$

$-\frac{12\pi}{6}$



$\cot\frac{11\pi}{6} = \frac{\frac{\sqrt{3}}{\cancel{2}}\cdot\frac{\cancel{2}}{1}}{-\frac{1}{2}}$

$= -\sqrt{3}$

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

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

$= -\sqrt{2}$

F) $\sec\frac{23\pi}{6}$

$\frac{23\pi}{6} - \frac{12\pi}{6} = \frac{11\pi}{6}$

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

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

$-\frac{\pi}{2}+\frac{4\pi}{2}=\frac{3\pi}{2}$

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

A) 90°

$\sin 90^\circ = 1$

$\cos 90^\circ = 0$

$\tan 90^\circ = \frac{1}{0}$ undefined

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

$\sin \frac{3\pi}{2} = -1$

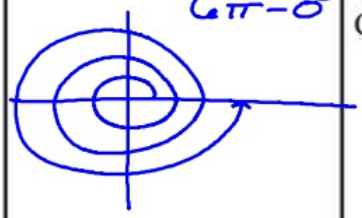
$\cos \frac{3\pi}{2} = 0$

$\tan \frac{3\pi}{2} = \frac{-1}{0}$ undefined

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

$\frac{y}{x}$

$6\pi - 0^\circ$



C) $6\pi = 0$

$\sin 0 = 0$

$\cos 0 = 1$

$\tan 0 = \frac{0}{1} = 0$

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

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

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

$\tan \frac{\pi}{2}$ = undefined

Evaluate without using a calculator

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

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