

6 trig functions:

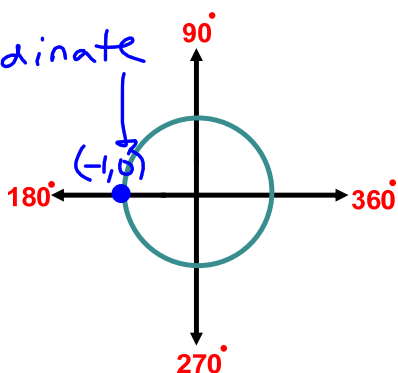
$$\sin \theta = \frac{y}{1} = y \quad \csc \theta = \frac{1}{y}$$

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

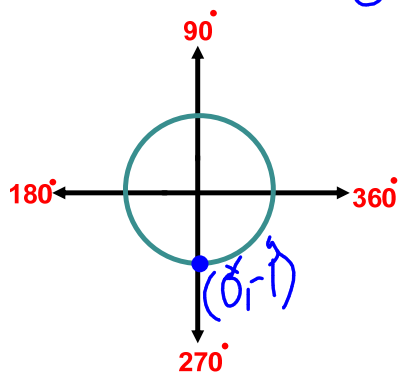
$$\tan \theta = \frac{y}{x} \quad \cot \theta = \frac{x}{y}$$

Ex.1  $\sin 180^\circ$

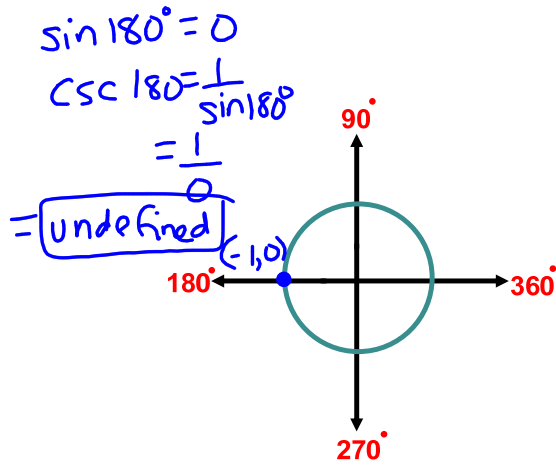
= y-coordinate



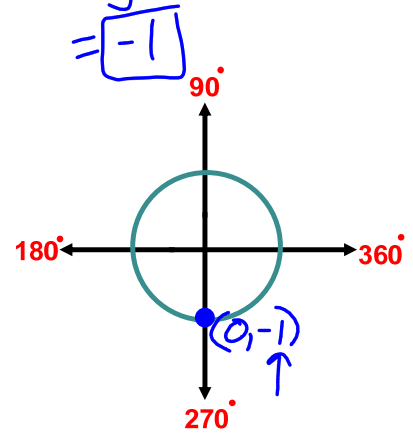
Ex. 2  $\tan 270^\circ = \frac{y}{x} = \frac{-1}{0} = \text{undefined}$



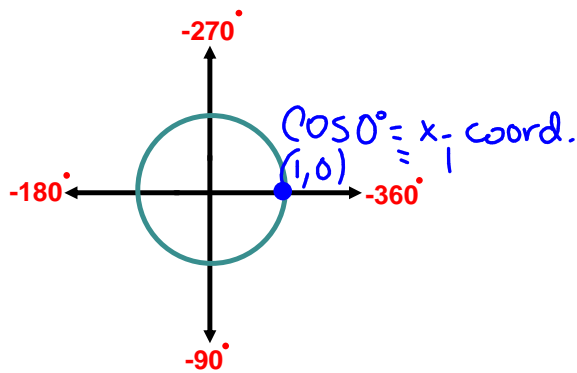
Ex. 3.  $\csc 180^\circ$



Ex. 4  $\sin 270^\circ = y\text{-coord.}$



Ex. 5  $\sec(-720^\circ) = \sec(-360^\circ)$   
 $= \sec(0^\circ)$   
 $= \frac{1}{\cos 0} = \frac{1}{1} = 1$



Ex. 6  $\cot(-270^\circ)$   
 $\tan(-270^\circ) = \frac{y}{x} = \frac{1}{0}$   
 $\cot(270^\circ) = \frac{0}{1} = 0$

