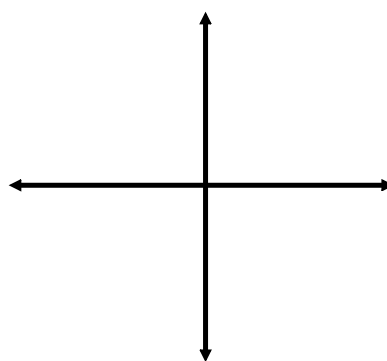
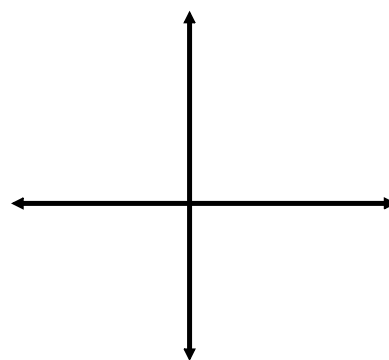


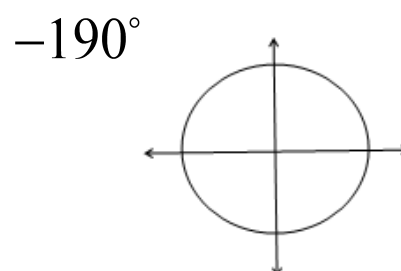
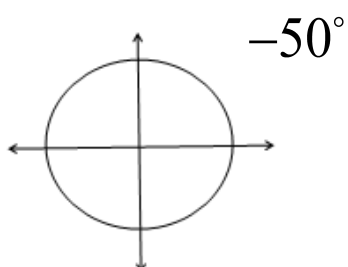
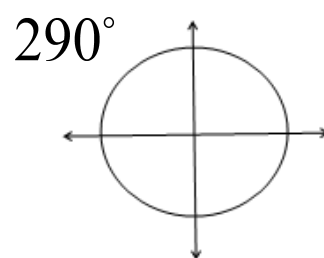
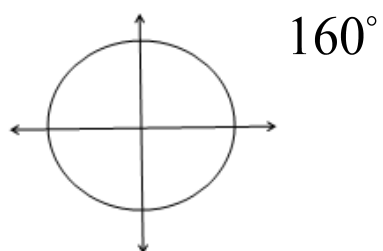
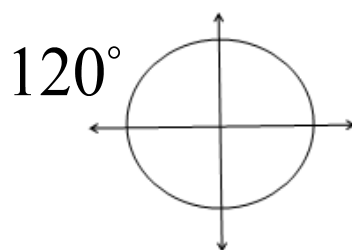
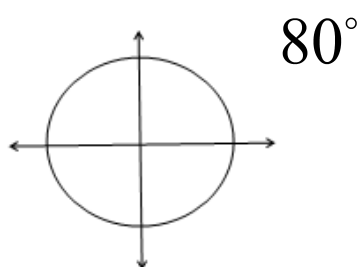
If an angle measure is positive, the terminal side is rotated **COUNTERCLOCKWISE**

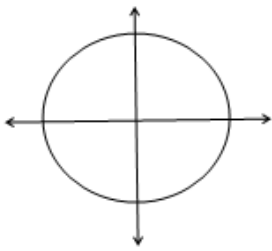
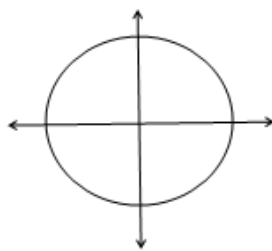
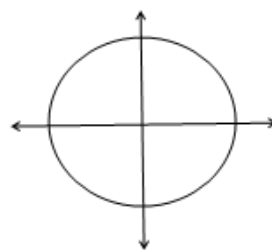


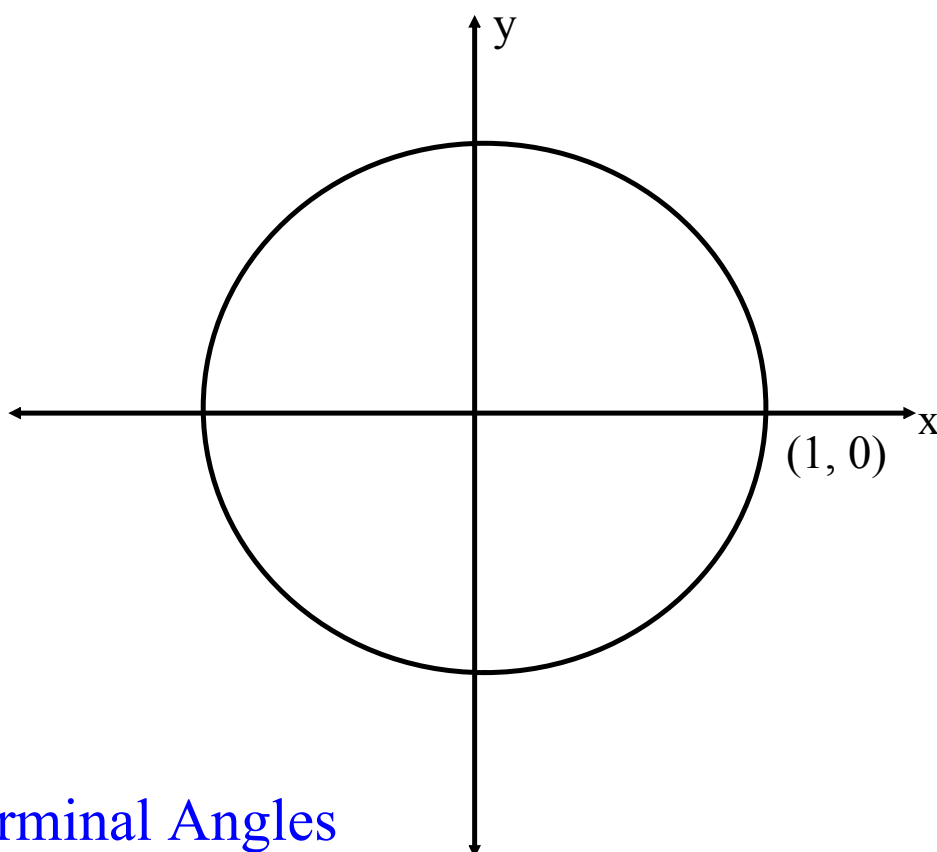
If an angle measure is negative, the terminal side is rotated **CLOCKWISE**



Draw the following angles in standard position:



 $420^\circ$  $930^\circ$  $-570^\circ$



### Co-terminal Angles

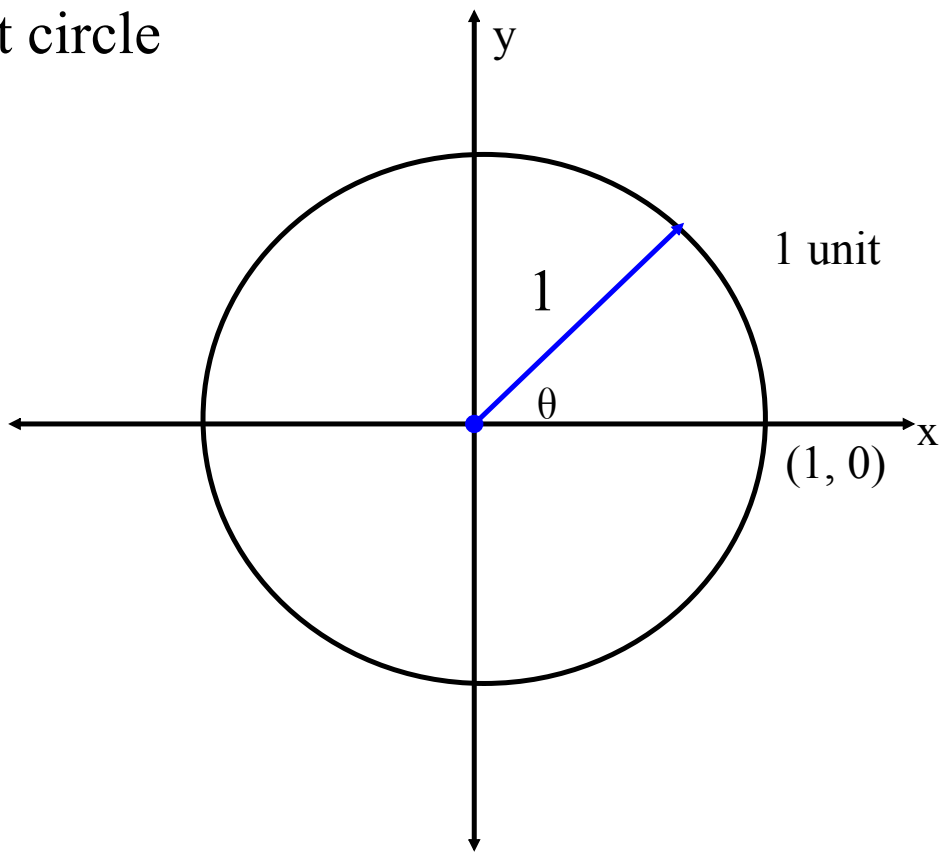
2 angles in standard position with the same terminal side

Find an angle coterminal with  $15^\circ$

Find an angle with a positive measure coterminal with  $45^\circ$

Find an angle with negative measure coterminal with  $120^\circ$

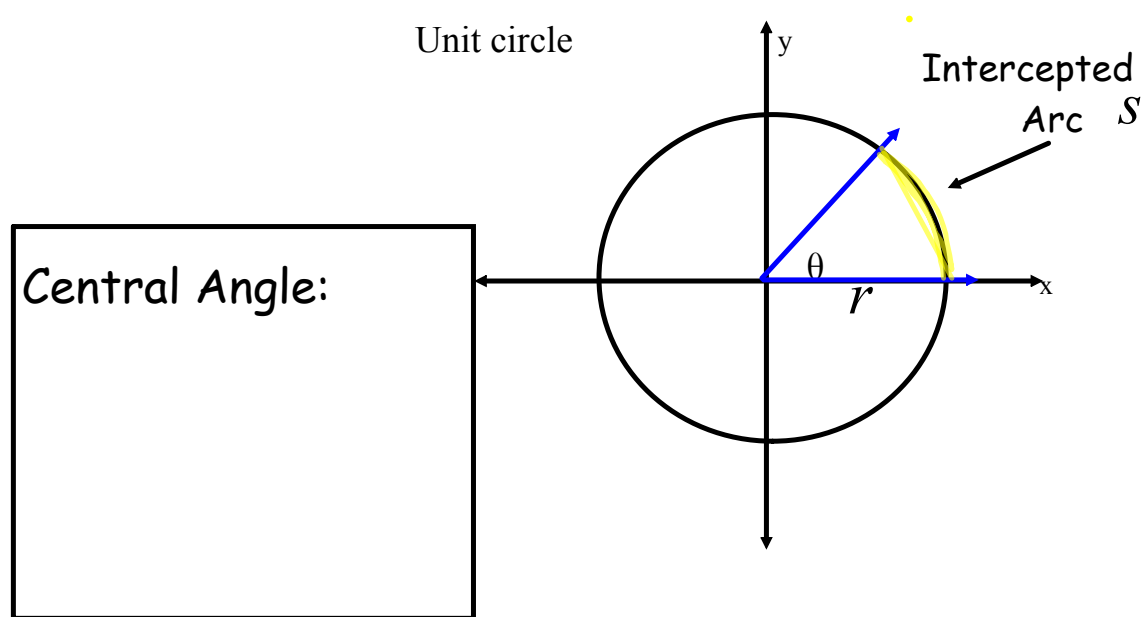
Unit circle



## Converting Between Degrees and Radians

Degrees to Radians	Radians to Degrees
$\frac{\pi}{180^\circ}$	$\frac{180^\circ}{\pi}$

Change  $60^\circ$  to radiansChange  $\frac{5\pi}{3}$  radians to degreesChange  $120^\circ$  to radiansChange  $-\frac{3\pi}{8}$  to degrees

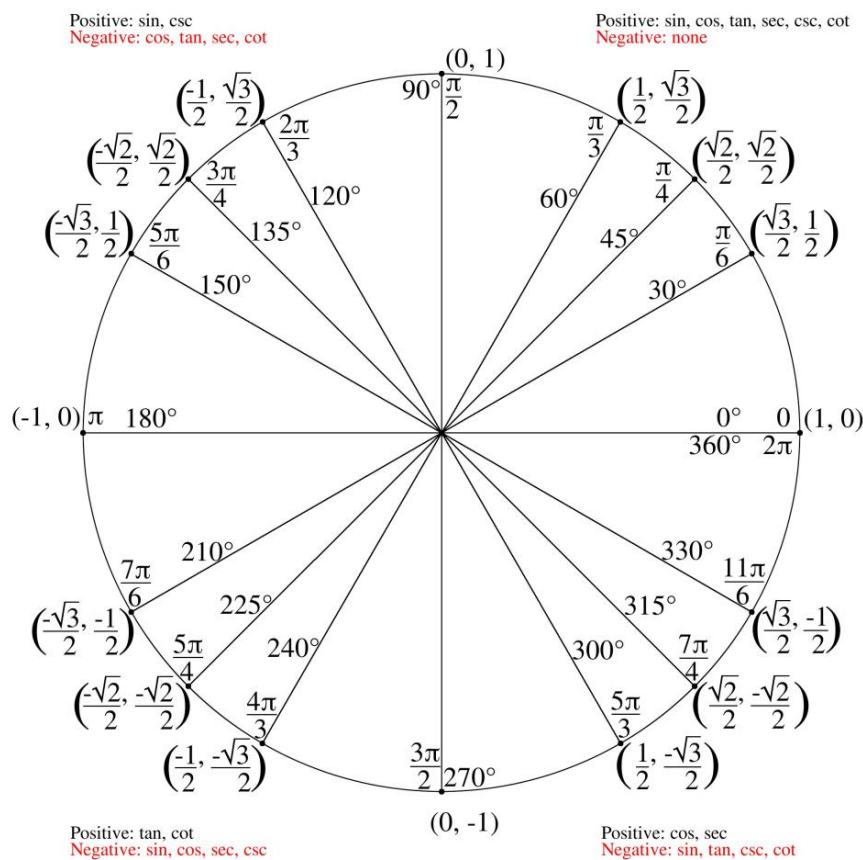


Arc Length  $s$   
radius  $r$   
central angle  $\theta$

$$s = r\theta$$

A circle has a diameter of 9cm. Find the arc length if the central angle is  $60^\circ$ .

# The Unit Circle



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