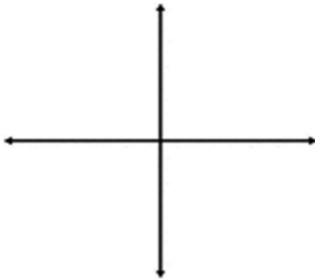


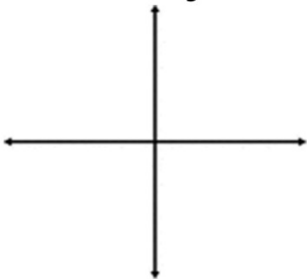
## Bellwork

Answer the following questions:

1. Which way is clockwise?



2. Which way is counter clockwise?



3. How many degrees in a full circle? Radians?

## **Angles in Standard Position**

Consist of two sides:

1. Initial Side - The side that lies on the x-axis and does not move.
2. Terminal Side - The side that moves to form the desired angle.

Determining the path or rotation:

1. Clockwise - If the angle is **NEGATIVE**
2. Counter Clockwise - If the angle is **POSITIVE**

## **Types of Angles**

We will focus on two modes of angle measurement:

1. Degrees - You will know it is in degrees  
IF you see the degree symbol.
2. Radians - You will know it is in radians  
IF you see the pi ( $\pi$ ) symbol.

## Switching Angle Measurements

To change an angle measurement from degrees to radians:

Multiply by  $\frac{\pi}{180}$

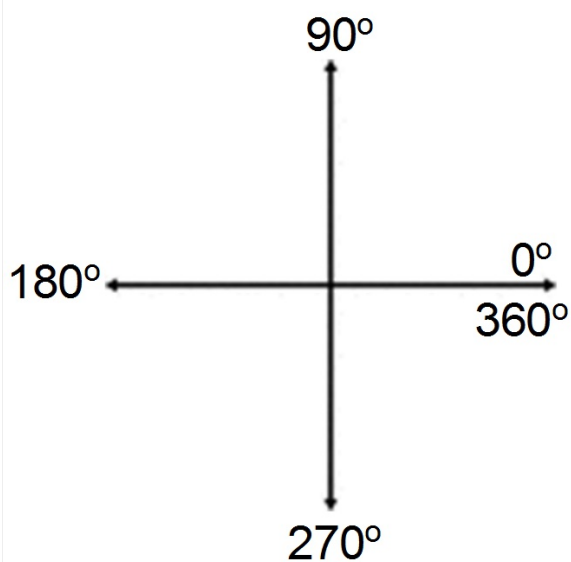
To change an angle measurement from radians to degrees:

(HIGHLY RECOMMENDED FOR THESE)

Multiply by  $\frac{180}{\pi}$

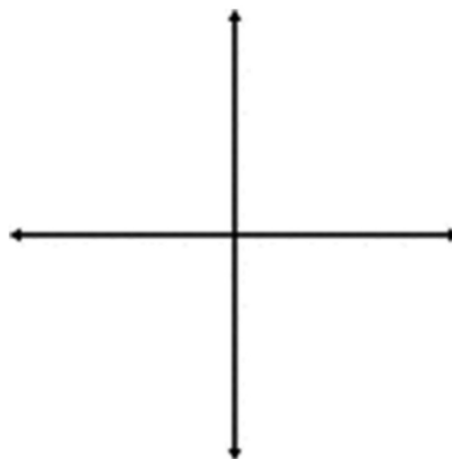
# Graphing Using POSITIVE Degrees

Model



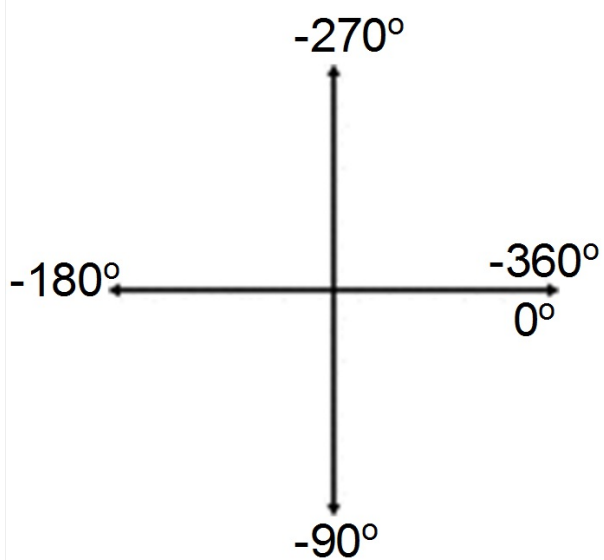
**MUST SHOW DIRECTION OF ROTATION WITH AN ARROW!**

Example:  $1250^\circ$



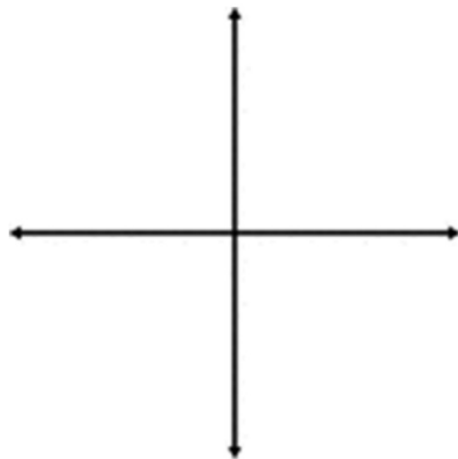
## Graphing Using NEGATIVE Degrees

Model



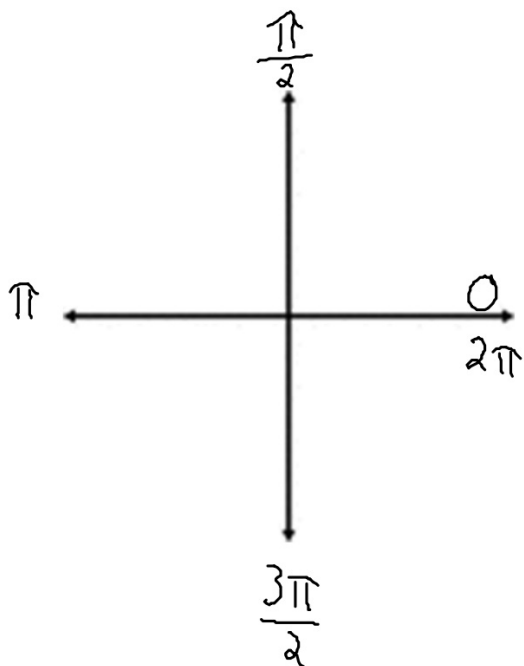
**MUST SHOW DIRECTION OF ROTATION WITH AN ARROW!**

Example:  $-1025^\circ$



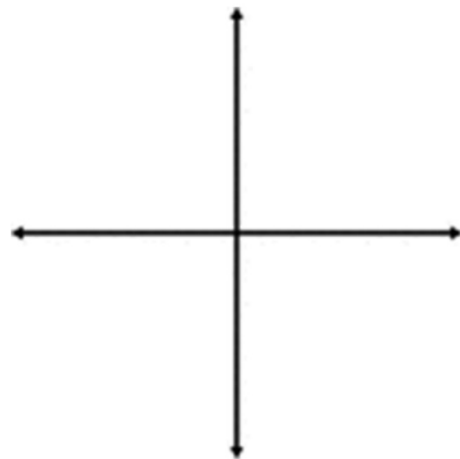
# Graphing Using POSITIVE Radians

Model



**MUST SHOW DIRECTION OF ROTATION WITH AN ARROW!**

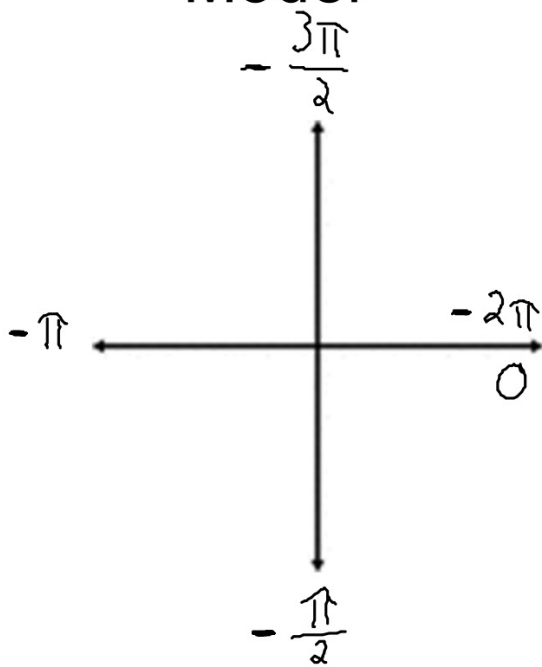
Example:  $\frac{13\tilde{\pi}}{4}$



Convert to Degrees:

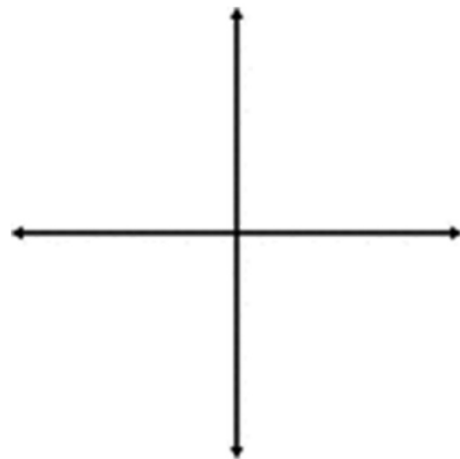
## Graphing Using NEGATIVE Radians

Model



**MUST SHOW DIRECTION OF ROTATION WITH AN ARROW!**

Example:  $-\frac{23\pi}{7}$



Convert to Degrees: