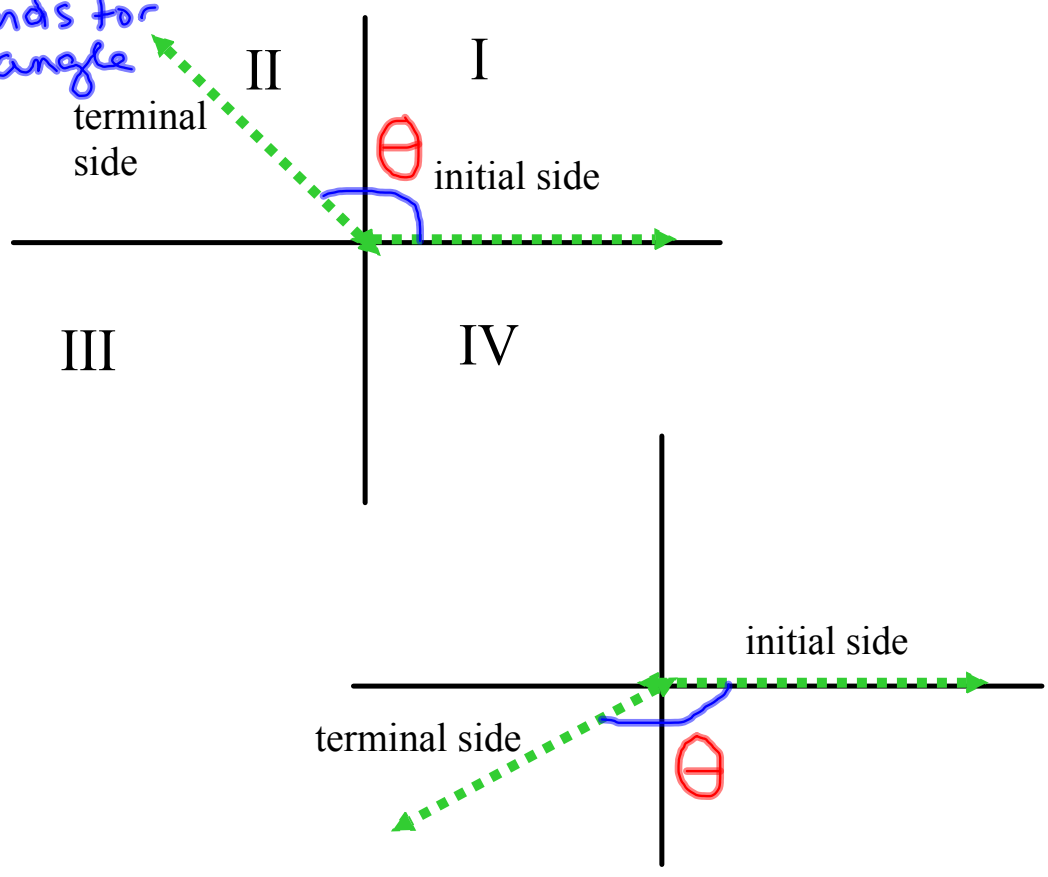


$\theta \rightarrow$  theta  
stands for  
the angle

### Angles



To convert

Degrees to radians:  $D * \frac{\pi}{180}$

Radians to degrees:  $R * \frac{180}{\pi}$

Examples:

135 degrees = ?? radians

$$\begin{array}{l} \text{D. II} \\ 3 \cdot 27 \cdot 180 \quad \frac{3\pi}{4} \\ \frac{135 \cdot \pi}{180} \quad 364 \end{array}$$

540 degrees = ?? radians

$$\begin{array}{l} 3 \\ \frac{540 \cdot \pi}{180} = \frac{3\pi}{1} \end{array}$$

$$-\frac{\pi}{2} = ?? \text{ degrees}$$

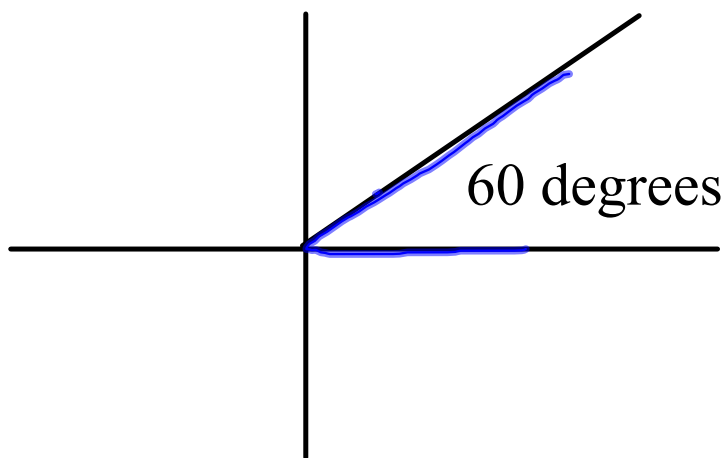
$$R \cdot \frac{180}{\pi}$$
$$-\frac{\pi}{2} \cdot \frac{180}{\pi} = -90^\circ$$

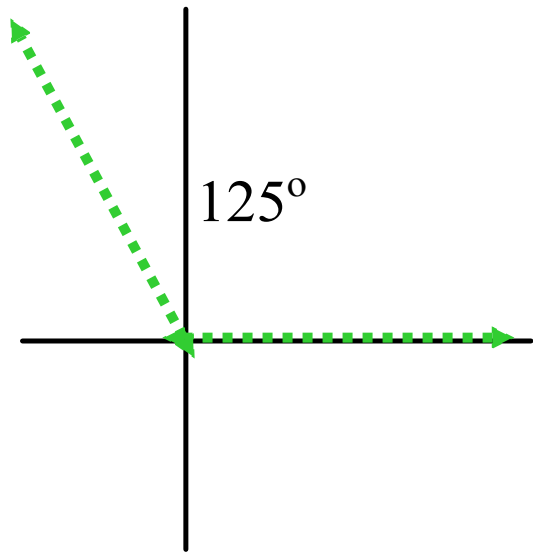
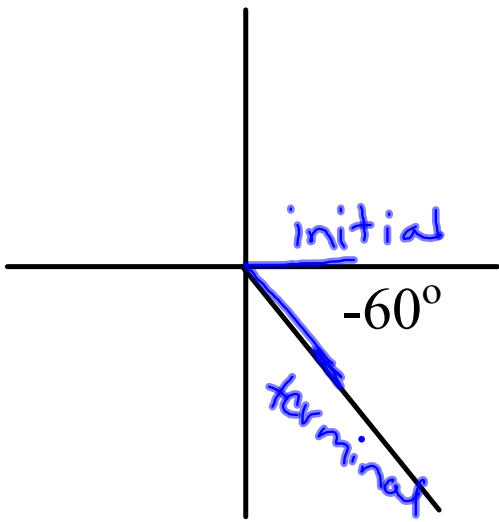
$$\frac{9\pi}{2} = ?? \text{ degrees}$$

$$\frac{9\pi}{2} \cdot \frac{180}{\pi} = 810^\circ$$

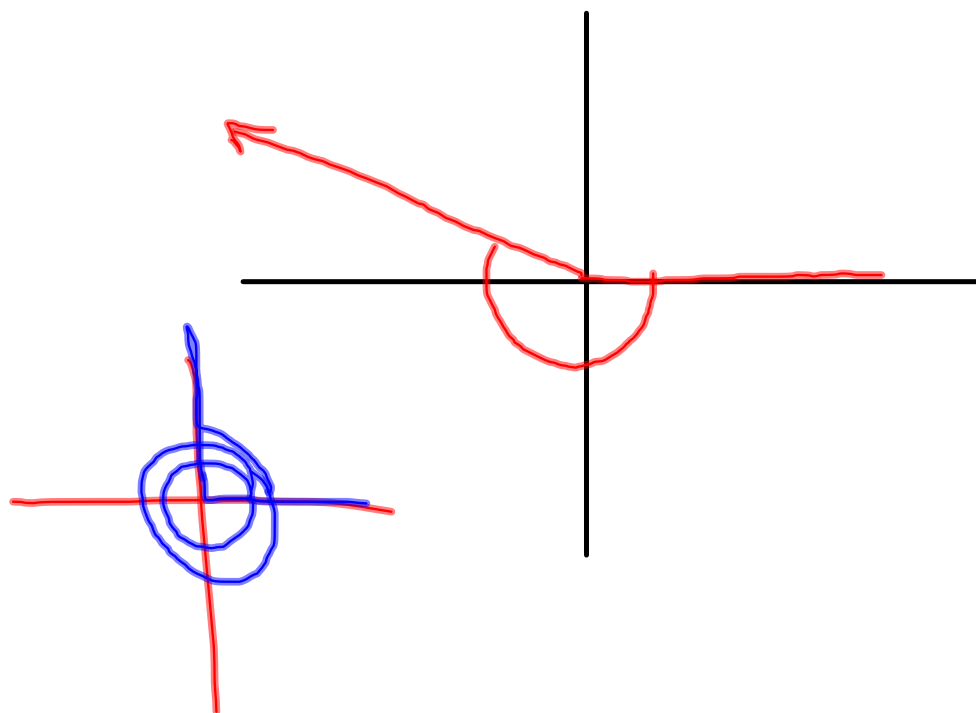
Determining quadrants the terminal side is in:

Start at 0 degrees.





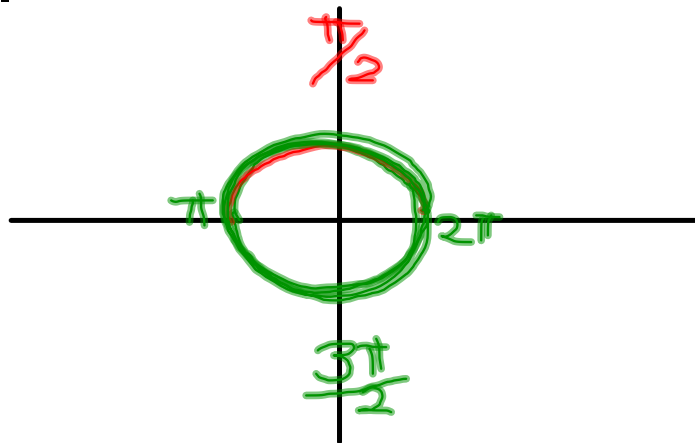
Try a negative 200 degrees:

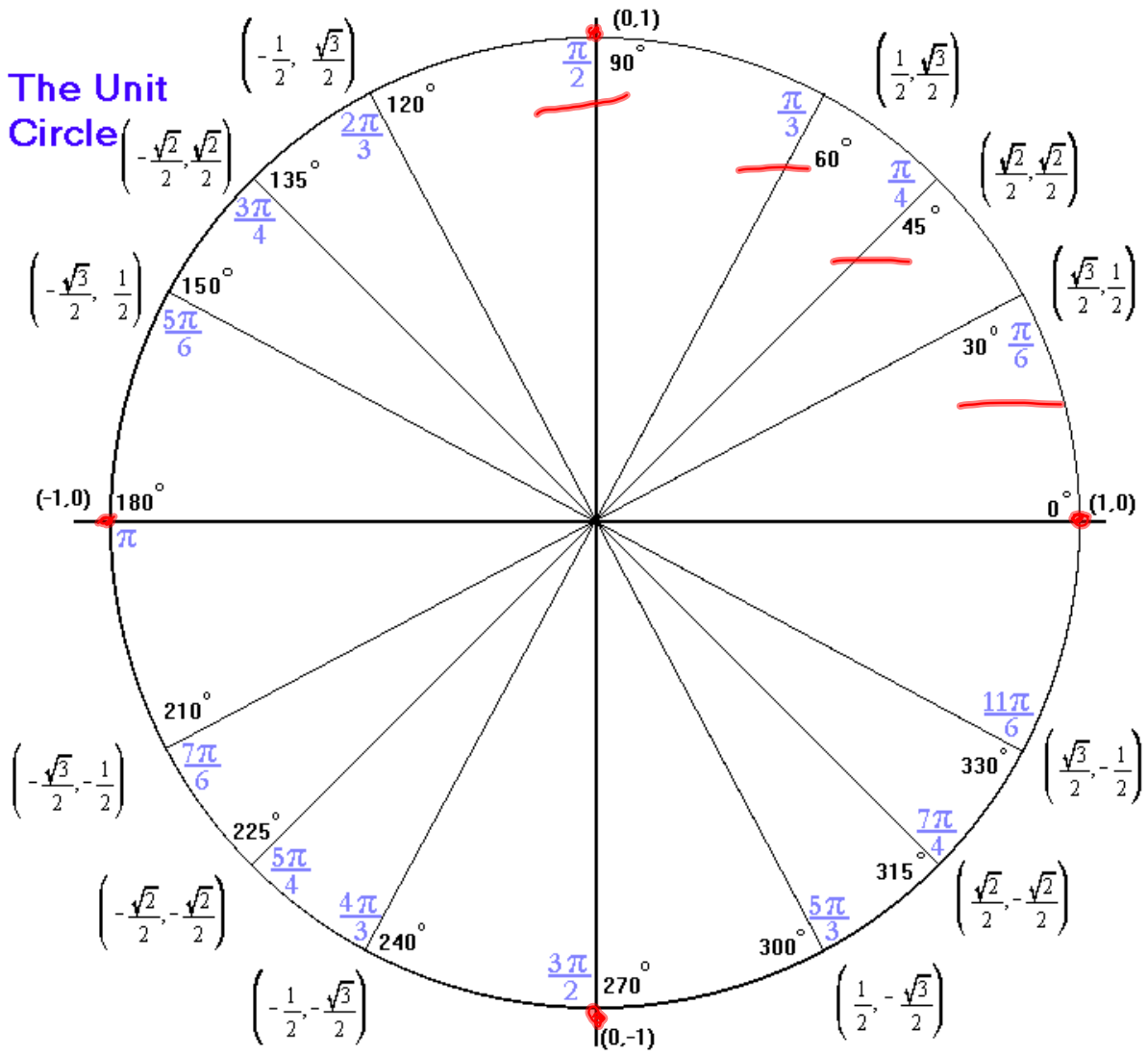


Try  $\frac{\pi}{3}$

Without the unit circle, you would have to change to degrees.

$$\pi = 180^\circ$$



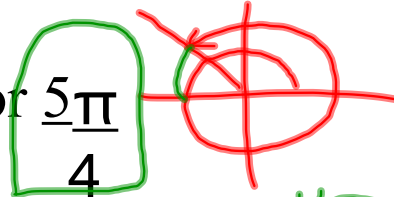


Reference angles--angles from the terminal side to the x-axis.

Find the reference angle of  $510^\circ$ .

$510 - 360 = 150$ , so the reference angle is  $30$ .

Find the reference angle for  $\frac{5\pi}{4}$



First change to degrees

$$\frac{5\pi}{4} \cdot \frac{180}{\pi} = 225$$

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



Without changing to degrees:



NoTincalc ↓	Enter into calc Marks	Freq   Enter into calc
58-62	_____	_____
62-66	_____	_____
		_____
		_____