

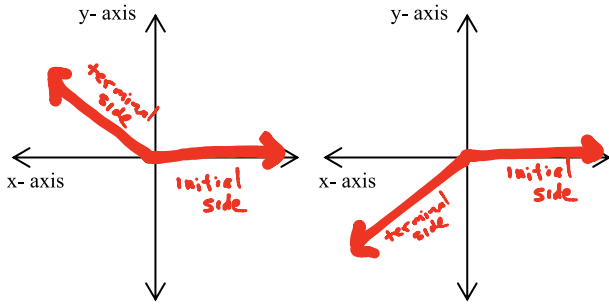
# The Trigonometric Functions

## 18.1 – Angles & Degrees

Name \_\_\_\_\_

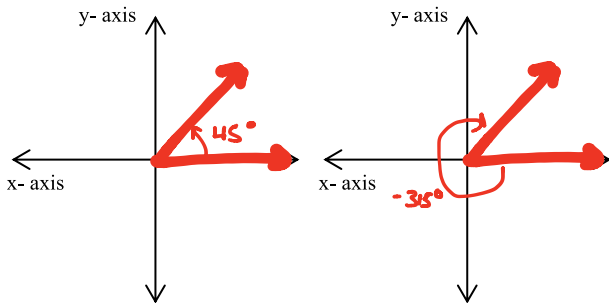
**Initial Side of an Angle:** A ray in an angle that remains fixed.

**Terminal Side of an Angle:** A ray in an angle that rotates.



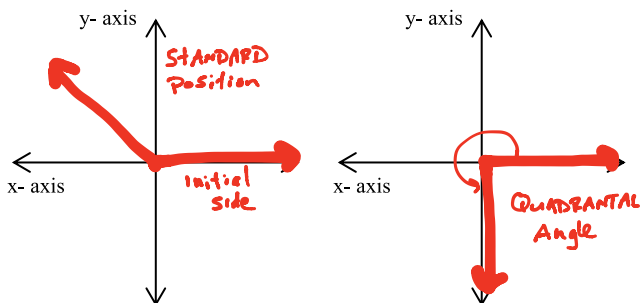
**Positive Angle:** An angle formed by the terminal side rotating counterclockwise.

**Negative Angle:** An angle formed by the terminal side rotating clockwise.

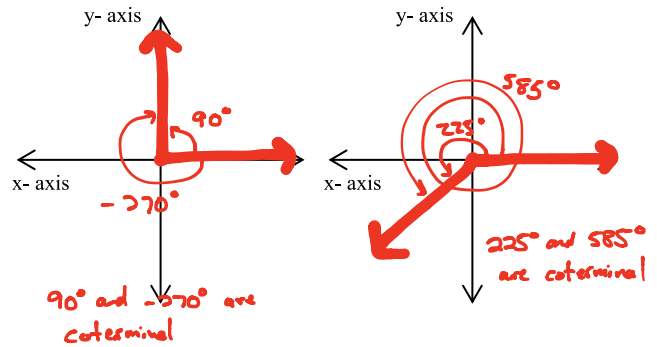


**Standard Position:** An angle with its vertex at the origin and its initial side along the positive x-axis.

**Quadrantal Angle:** An angle in standard position whose terminal side coincides with one of the axes.

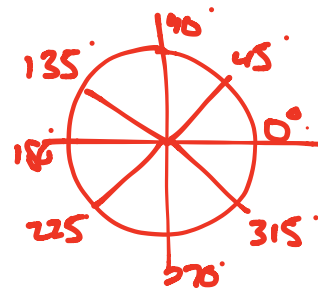
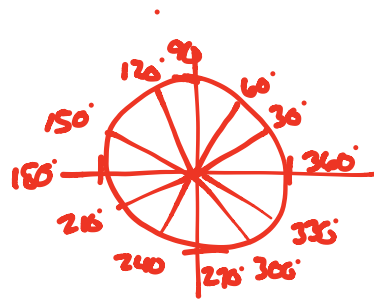


**Coterminal Angles:** Two angles in standard position whose terminal sides coincide with each other.



**Degrees:** An angle has a measure of one degree if it results from  $\frac{1}{360}$  of a complete revolution in the positive direction.

Draw a circle with radius 1 whose center is at the origin. Label each angle around the circle counting by  $30^\circ$ . Do the same for  $45^\circ$ .



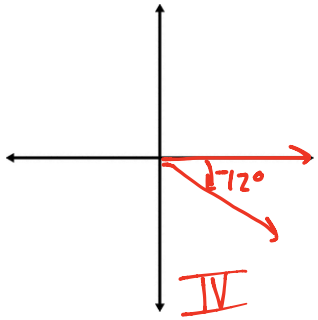
# The Trigonometric Functions

## 18.1 – Angles & Degrees

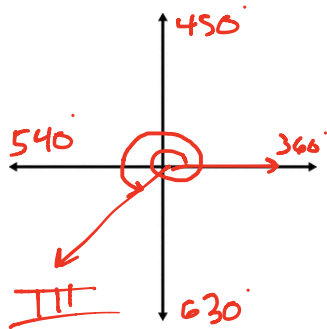
Name \_\_\_\_\_

Ex A: Draw an angle in standard position with the given measure and identify the quadrant in which the terminal sides lies.

#1)  $-12^\circ$

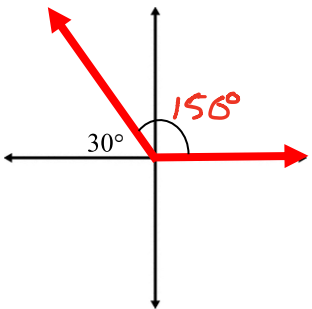


#2)  $570^\circ$

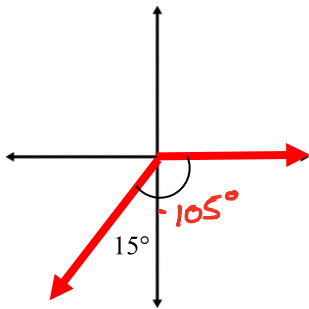


Ex B: Find the measure of each angle in degrees.

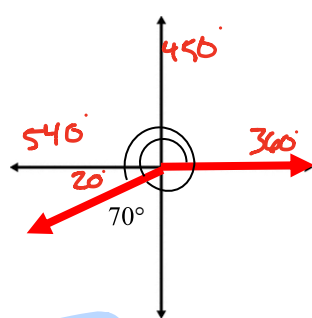
#1)



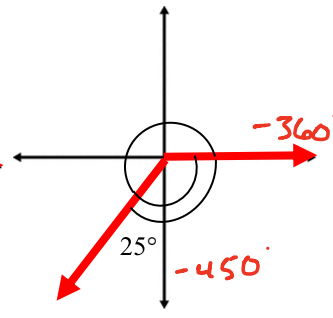
#2)



#3)



#4)



Ex C: Find one positive angle and one negative angle that is coterminal with each angle.

#1)  $100^\circ$

positive

$$\begin{aligned} \text{Coterminal} &= 100^\circ + 360^\circ \\ &= 460^\circ \end{aligned}$$

negative

$$\begin{aligned} \text{Coterminal} &= 100^\circ - 360^\circ \\ &= -260^\circ \end{aligned}$$

Ex D: Find a coterminal angle between  $0^\circ$  and  $360^\circ$ .

#1)  $-70^\circ$

$$\begin{aligned} \text{Coterminal} &= -70^\circ + 360^\circ \\ &= 290^\circ \end{aligned}$$