

**Objective:** To evaluate trigonometric functions through any given point.

**Warm Up:** Sketch the angle in standard position and find the measure of the reference angle for each angle below.

a.  $130^\circ$

b.  $345^\circ$

c.  $250^\circ$

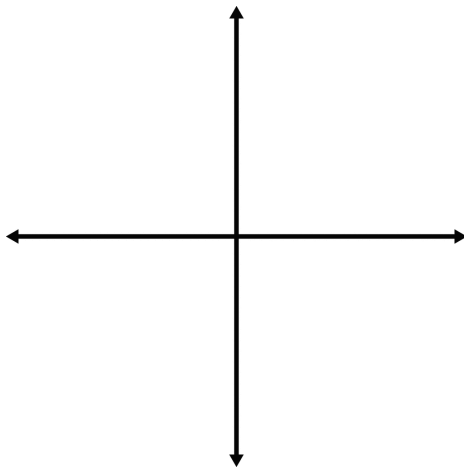
**Example:** Let P be a point on the terminal side of  $\theta$ . Draw a picture and find the three trig functions of  $\theta$ .

A.)  $P(3, 4)$

$\sin \theta =$

$\cos \theta =$

$\tan \theta =$

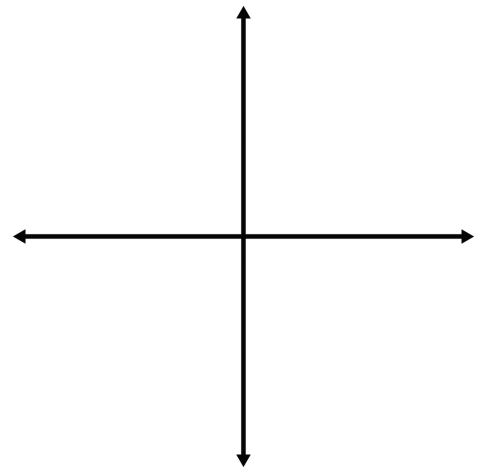


B.)  $P(5, -12)$

$\sin \theta =$

$\cos \theta =$

$\tan \theta =$



**Example:** Find the exact value of the three trig functions of an angle  $\theta$ , in standard position, given the following information:

A.)  $\sin \theta = -\frac{3}{5}$ ; terminal side of angle  $\theta$  lies in quadrant III

B.)  $\tan \theta = -\frac{12}{5}$ ; terminal side of angle  $\theta$  lies in quadrant IV

C.)  $\tan \theta = 3$ ; terminal side of angle  $\theta$  lies in quadrant III