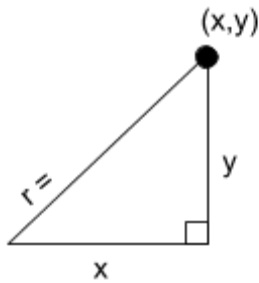


Honors Algebra 2 with Trig  
5.2 Trigonometric Functions



$$\sin \theta =$$

$$\cos \theta =$$

$$\tan \theta =$$

$$\csc \theta =$$

$$\sec \theta =$$

$$\cot \theta =$$

1. The terminal side of an angle  $\theta$  in standard position passes through the point  $(8, -6)$ . Find the values of the six trigonometric functions of angle  $\theta$ .

$$\sin \theta =$$

$$\cos \theta =$$

$$\tan \theta =$$

$$\csc \theta =$$

$$\sec \theta =$$

$$\cot \theta =$$

2. Find the six trigonometric functions of the angle  $\theta$  in standard position, if the terminal side of  $\theta$  is defined by  $3x - 2y = 0, x \leq 0$ .

$$\sin \theta =$$

$$\cos \theta =$$

$$\tan \theta =$$

$$\csc \theta =$$

$$\sec \theta =$$

$$\cot \theta =$$

3. Find the six trigonometric functions for an angle  $\theta$  in standard position with terminal side passing through  $(0, -5)$ .

$$\sin \theta =$$

$$\cos \theta =$$

$$\tan \theta =$$

$$\csc \theta =$$

$$\sec \theta =$$

$$\cot \theta =$$

Reciprocal Identities		
$\sin \theta =$	$\cos \theta =$	$\tan \theta =$
$\csc \theta =$	$\sec \theta =$	$\cot \theta =$

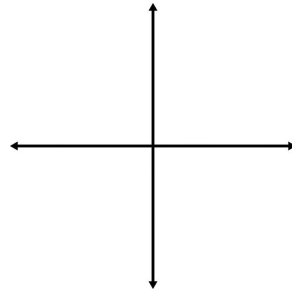
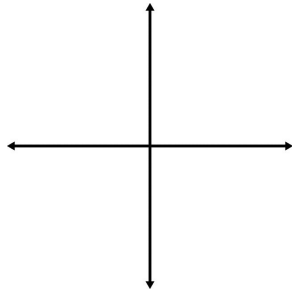
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4. Find each function value:

a.  $\tan \theta$ , given that  $\cot \theta = 4$

b.  $\sec \theta$ , given that  $\cos \theta = -\frac{2}{\sqrt{20}}$

Signs of Trigonometric Function Values



5. Determine the signs of the trigonometric functions of an angle in standard position with the given measure

a.  $260^\circ$

b.  $-60^\circ$

$\sin \theta =$        $\csc \theta =$

$\cos \theta =$        $\sec \theta =$

$\tan \theta =$        $\cot \theta =$

$\sin \theta =$        $\csc \theta =$

$\cos \theta =$        $\sec \theta =$

$\tan \theta =$        $\cot \theta =$

6. Identify the quadrant (or possible quadrants) of an angle  $\theta$  that satisfies the given condition:  $\tan \theta > 0$ ,  $\csc \theta < 0$

7. Proof time! See if you can determine what these identities are equal to:

Identities		
$\frac{\sin \theta}{\cos \theta} =$	$\frac{\cos \theta}{\sin \theta} =$	
$\sin^2 \theta + \cos^2 \theta =$	$\tan^2 \theta + 1 =$	$1 + \cot^2 \theta =$

8. Find  $\cos \theta$  and  $\tan \theta$ , given that  $\sin \theta = -\frac{\sqrt{2}}{3}$  and  $\cos \theta > 0$