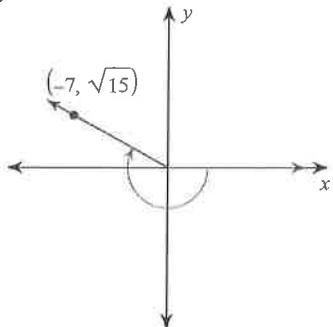


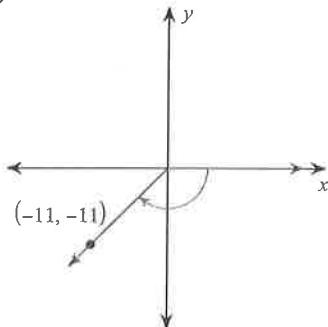
## Cosine and Sine Functions

Use the given point on the terminal side of angle  $\theta$  to find the value of the trigonometric function indicated. Sketch the reference triangle.

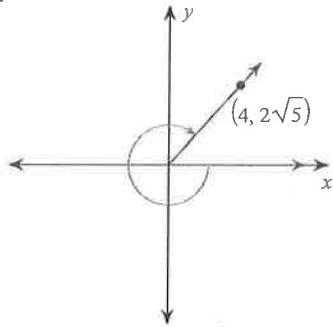
1)  $\sin \theta$



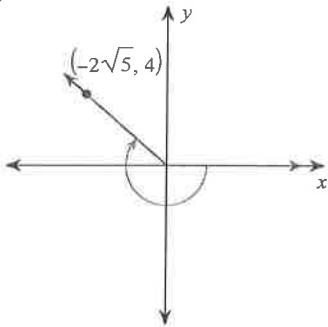
2)  $\cos \theta$



3)  $\cos \theta$



4)  $\sin \theta$



5)  $\cos \theta; (-12, -5)$

6)  $\cos \theta; (-3, -4)$

7)  $\cos \theta; (-3, 12)$

8)  $\cos \theta; (-\sqrt{15}, 7)$

Angle  $\theta$  is in standard position and lies in the given quadrant. When  $\sin \theta$  is given, find the exact value of  $\cos \theta$ . When  $\cos \theta$  is given, find the exact value of  $\sin \theta$ .

9)  $\sin \theta = \frac{1}{2}; Q1$

10)  $\cos \theta = \frac{1}{2}; Q1$

$$11) \sin\theta = -\frac{\sqrt{3}}{2}; Q3$$

$$12) \sin\theta = -\frac{12}{13}; Q4$$

$$13) \cos\theta = \frac{5}{11}; Q4$$

$$14) \cos\theta = -\frac{5}{6}; Q2$$

Let  $\theta$  be an angle in standard position. In which Quadrant or quadrants can  $\theta$  lie under the given conditions?

$$15) \sin\theta > 0$$

$$16) \sin\theta < 0 \text{ and } \cos\theta > 0$$

$$17) \sin\theta = \cos\theta$$

$$18) \sin\theta = -\cos\theta$$

Find the exact value of  $\sin\theta$  if  $\cos\theta$  is given and  $\theta$  is an angle in standard position in Q1.

$$19) \cos\theta = \frac{4}{5}$$

$$20) \cos\theta = \frac{3}{5}$$

$$21) \cos\theta = \frac{12}{13}$$

$$22) \cos\theta = \frac{5}{13}$$

Find the exact value of  $\cos\theta$  if  $\sin\theta$  is given and  $\theta$  is an angle in standard position in Q2.

$$23) \sin\theta = \frac{\sqrt{3}}{2}$$

$$24) \sin\theta = \frac{1}{2}$$

$$25) \sin\theta = \frac{3}{5}$$

$$26) \sin\theta = \frac{5}{13}$$