

Trig Ratios of Any Angle

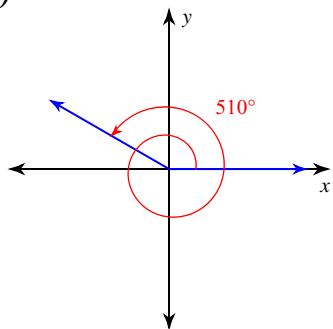
Use a calculator to find each. Round your answers to the nearest ten-thousandth.

1) $\sec -195^\circ$

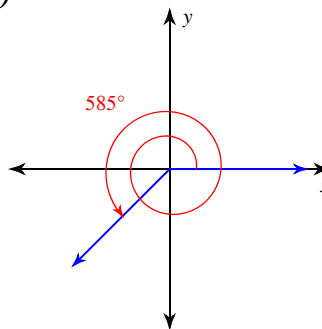
2) $\cos \frac{13\pi}{12}$

Find the exact value of each trigonometric function.

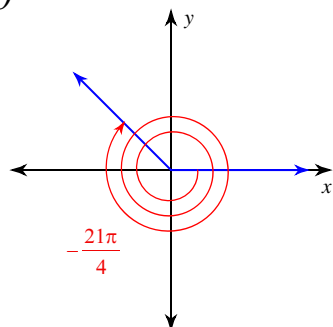
3) $\sin \theta$



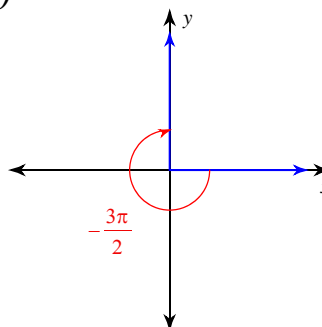
4) $\cos \theta$



5) $\tan \theta$



6) $\cos \theta$



7) $\cos \frac{17\pi}{4}$

8) $\cos -810^\circ$

9) $\cos \frac{9\pi}{4}$

10) $\sin \frac{15\pi}{4}$

11) $\sin -\frac{9\pi}{4}$

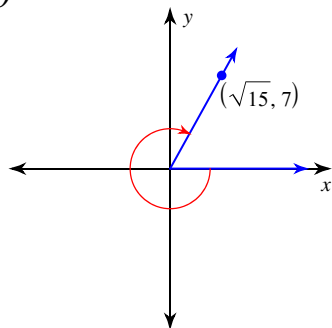
12) $\tan -945^\circ$

13) $\sin -720^\circ$

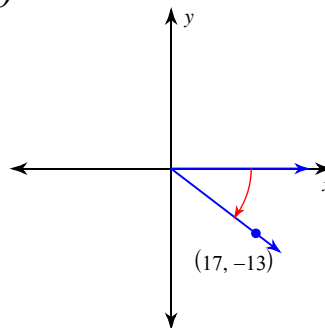
14) $\cos \frac{4\pi}{3}$

Use the given point on the terminal side of angle θ to find the value of the trigonometric function indicated.

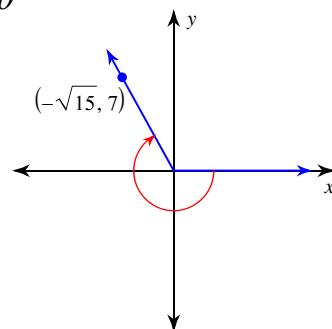
15) $\sin \theta$



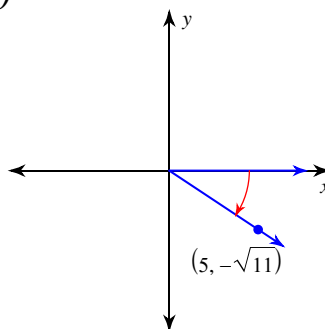
16) $\cot \theta$



17) $\sec \theta$



18) $\sin \theta$



Find the exact values of the five trigonometric ratios not given.

19) $\cot \theta = -\sqrt{7}$ and $\sin \theta > 0$

20) $\cos \theta = \frac{24}{25}$ and $\sin \theta < 0$

21) $\sin \theta = -\frac{2\sqrt{5}}{5}$ and $\cos \theta > 0$

22) $\tan \theta = -5$ and $\cos \theta > 0$

23) $\csc \theta = \frac{3\sqrt{7}}{7}$ and $\cos \theta < 0$

24) $\sec \theta = 2$ and $\sin \theta < 0$

Trig Ratios of Any Angle

Use a calculator to find each. Round your answers to the nearest ten-thousandth.

1) $\sec -195^\circ$

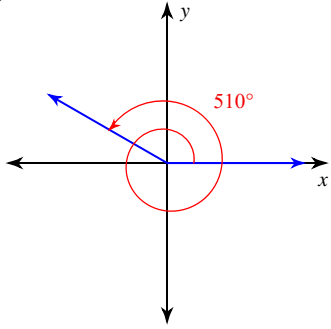
 -1.0353

2) $\cos \frac{13\pi}{12}$

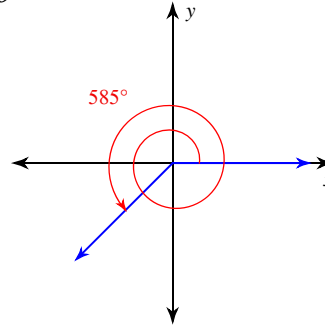
 -0.9659

Find the exact value of each trigonometric function.

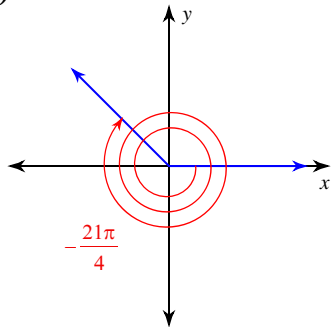
3) $\sin \theta$

 $\frac{1}{2}$ 

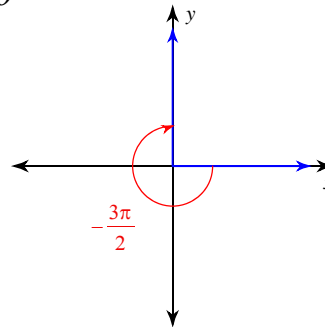
4) $\cos \theta$

 $-\frac{\sqrt{2}}{2}$ 

5) $\tan \theta$

 -1 

6) $\cos \theta$

 0 

7) $\cos \frac{17\pi}{4}$

 $\frac{\sqrt{2}}{2}$

8) $\cos -810^\circ$

 0

9) $\cos \frac{9\pi}{4}$

 $\frac{\sqrt{2}}{2}$

10) $\sin \frac{15\pi}{4}$

 $-\frac{\sqrt{2}}{2}$

11) $\sin -\frac{9\pi}{4}$

 $-\frac{\sqrt{2}}{2}$

12) $\tan -945^\circ$

 -1

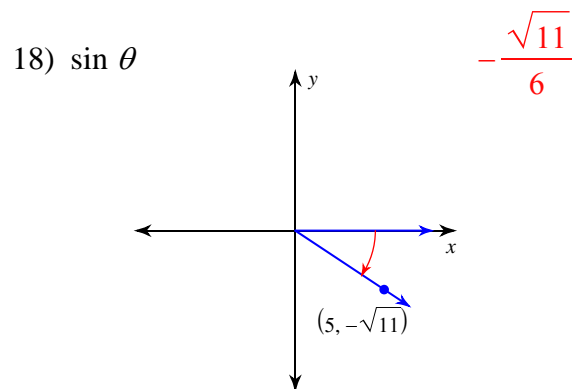
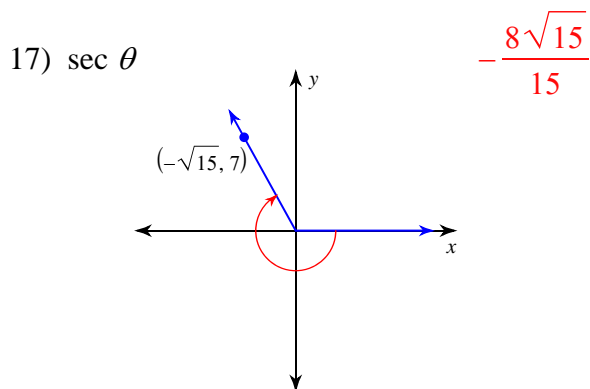
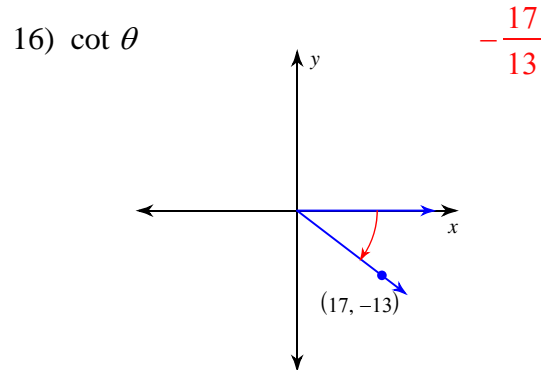
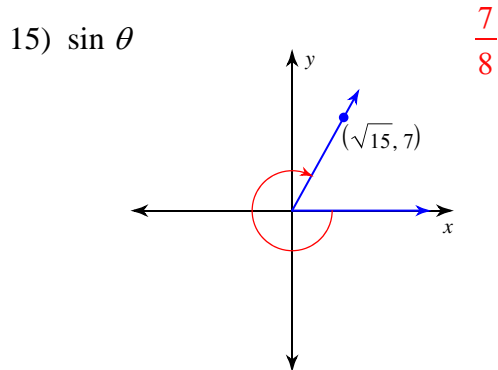
13) $\sin -720^\circ$

 0

14) $\cos \frac{4\pi}{3}$

 $-\frac{1}{2}$

Use the given point on the terminal side of angle θ to find the value of the trigonometric function indicated.



Find the exact values of the five trigonometric ratios not given.

19) $\cot \theta = -\sqrt{7}$ and $\sin \theta > 0$

$$\sin \theta = \frac{\sqrt{2}}{4}, \cos \theta = -\frac{\sqrt{14}}{4}, \tan \theta = -\frac{\sqrt{7}}{7}$$

$$\csc \theta = 2\sqrt{2}, \sec \theta = -\frac{2\sqrt{14}}{7}$$

20) $\cos \theta = \frac{24}{25}$ and $\sin \theta < 0$

$$\sin \theta = -\frac{7}{25}, \tan \theta = -\frac{7}{24}$$

$$\csc \theta = -\frac{25}{7}, \sec \theta = \frac{25}{24}, \cot \theta = -\frac{24}{7}$$

21) $\sin \theta = -\frac{2\sqrt{5}}{5}$ and $\cos \theta > 0$

$$\cos \theta = \frac{\sqrt{5}}{5}, \tan \theta = -2$$

$$\csc \theta = -\frac{\sqrt{5}}{2}, \sec \theta = \sqrt{5}, \cot \theta = -\frac{1}{2}$$

22) $\tan \theta = -5$ and $\cos \theta > 0$

$$\sin \theta = -\frac{5\sqrt{26}}{26}, \cos \theta = \frac{\sqrt{26}}{26}$$

$$\csc \theta = -\frac{\sqrt{26}}{5}, \sec \theta = \sqrt{26}, \cot \theta = -\frac{1}{5}$$

23) $\csc \theta = \frac{3\sqrt{7}}{7}$ and $\cos \theta < 0$

$$\sin \theta = \frac{\sqrt{7}}{3}, \cos \theta = -\frac{\sqrt{2}}{3}, \tan \theta = -\frac{\sqrt{14}}{2}$$

$$\sec \theta = -\frac{3\sqrt{2}}{2}, \cot \theta = -\frac{\sqrt{14}}{7}$$

24) $\sec \theta = 2$ and $\sin \theta < 0$

$$\sin \theta = -\frac{\sqrt{3}}{2}, \cos \theta = \frac{1}{2}, \tan \theta = -\sqrt{3}$$

$$\csc \theta = -\frac{2\sqrt{3}}{3}, \cot \theta = -\frac{\sqrt{3}}{3}$$