 Name_____

Trig Ratios of Any Angle

Date_____ Period____

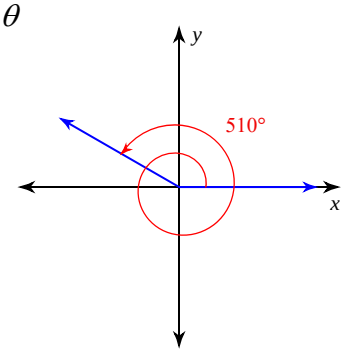
Use a calculator to find each. Round your answers to the nearest ten-thousandth.

1) sec −195°

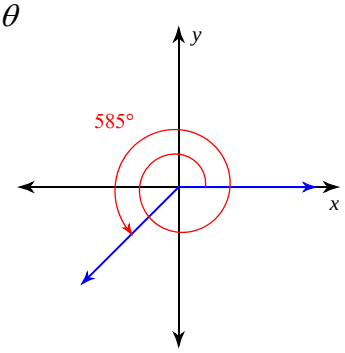
2) $\cos \frac{13\pi}{12}$

Find the exact value of each trigonometric function.

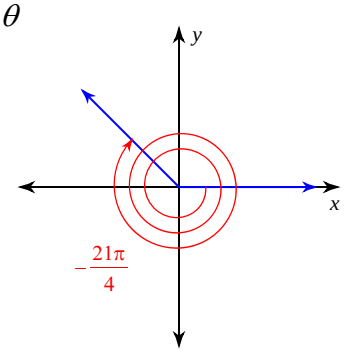
3) sin θ



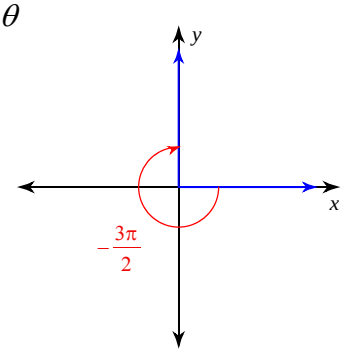
4) cos θ



5) tan θ



6) cos θ



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

8) cos −810°

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

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

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

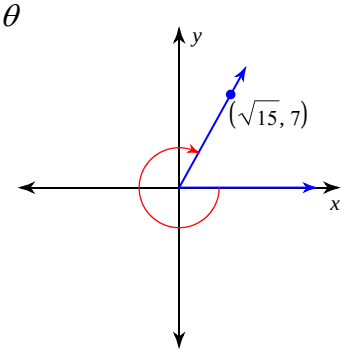
12) tan −945°

13) sin −720°

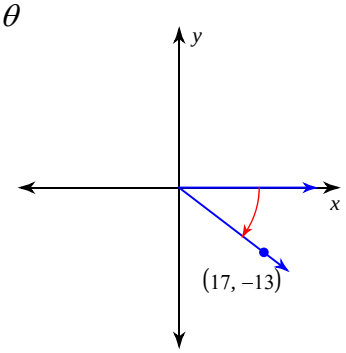
14) $\cos \frac{4\pi}{3}$

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

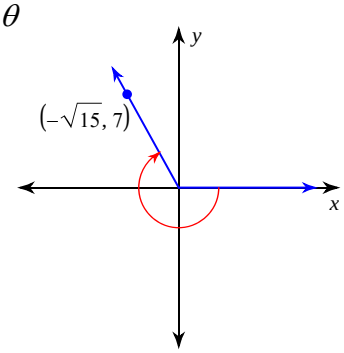
15) $\sin\theta$



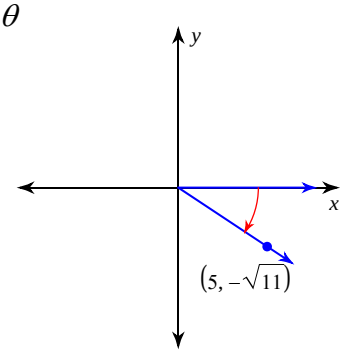
16) $\cot\theta$



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 $\sin\theta < 0$

 Name_____

Trig Ratios of Any Angle

Date_____ Period____

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

1) sec −195°

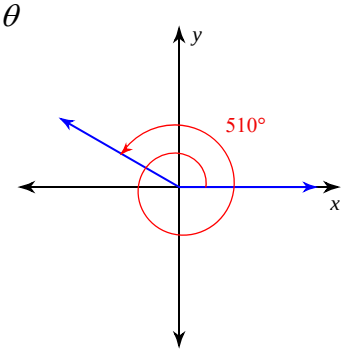
-1.0353

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

-0.9659

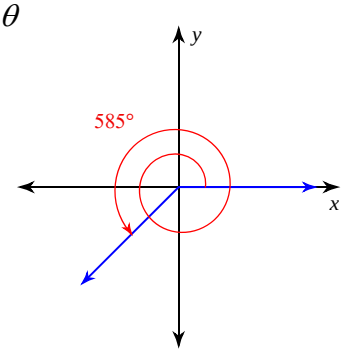
Find the exact value of each trigonometric function.

3) sin θ



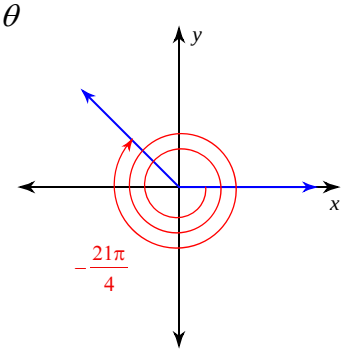
$\frac{1}{2}$

4) cos θ



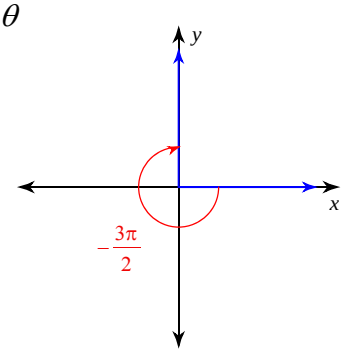
$-\frac{\sqrt{2}}{2}$

5) tan θ



−1

6) cos θ



0

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

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

8) cos −810°

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°

−1

13) sin −720°

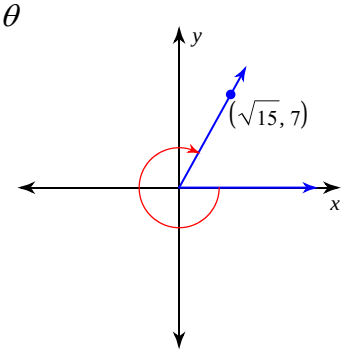
0

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

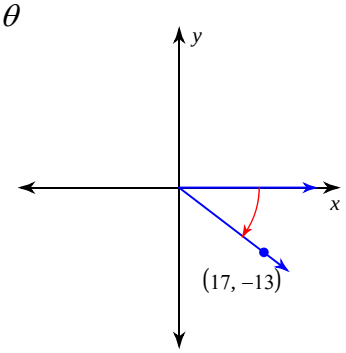
$-\frac{1}{2}$

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

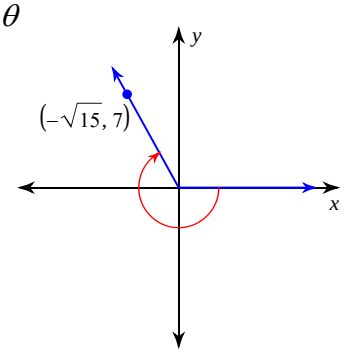
15) $\sin\theta$ $\frac{7}{8}$



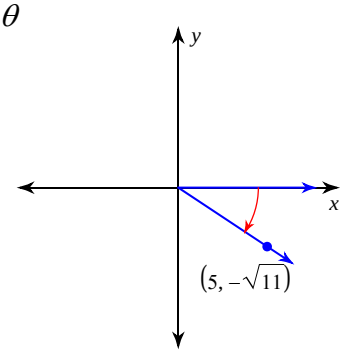
16) $\cot\theta$ $-\frac{17}{13}$



17) $\sec\theta$ $-\frac{8\sqrt{15}}{15}$



18) $\sin\theta$ $-\frac{\sqrt{11}}{6}$



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 $\sin\theta < 0$

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

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