

## Trig Ratios of General Angles

Date \_\_\_\_\_ Period \_\_\_\_\_

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

1)  $\cos 101^\circ$

2)  $\cos 310^\circ$

3)  $\sin 105^\circ$

4)  $\sin -305^\circ$

5)  $\sin -228^\circ$

6)  $\sin -120^\circ$

7)  $\cos -70^\circ$

8)  $\cos 140^\circ$

**Find the exact value of each trigonometric function. Some may be undefined.**

9)  $\cot -\frac{2\pi}{3}$

10)  $\sin -\frac{11\pi}{6}$

11)  $\csc \frac{5\pi}{3}$

12)  $\sec 0$

13)  $\tan -\frac{5\pi}{4}$

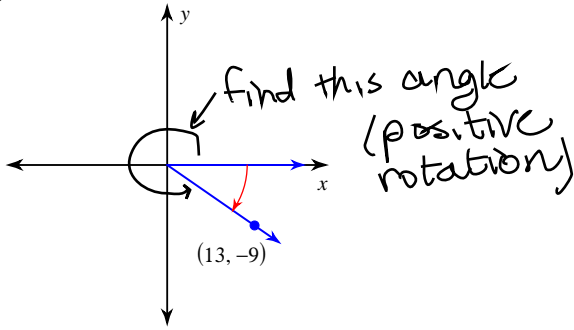
14)  $\sec -120^\circ$

15)  $\csc -315^\circ$

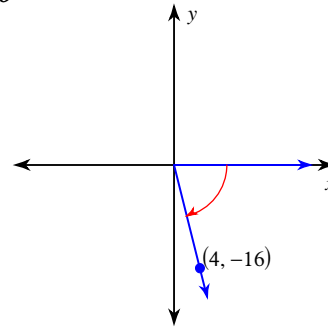
16)  $\csc 0$

Find exact values for the given ratios. Then find the angle in standard position.

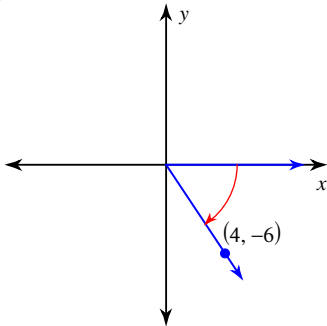
17)  $\sec \theta$



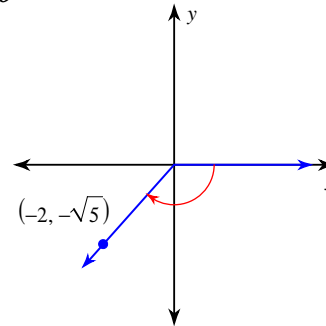
18)  $\sin \theta$



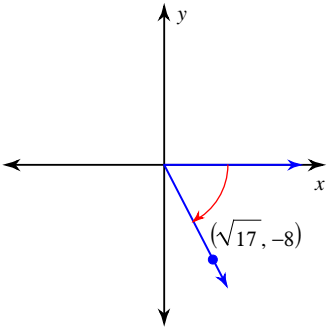
19)  $\cos \theta$



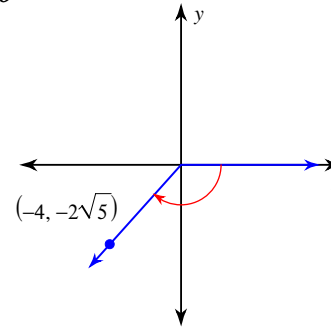
20)  $\cos \theta$



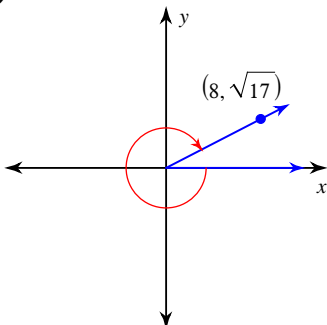
21)  $\csc \theta$



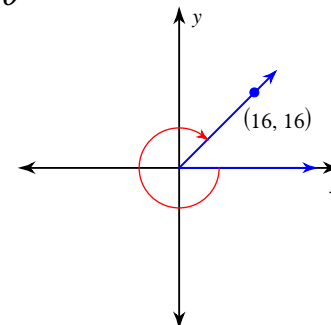
22)  $\sin \theta$



23)  $\cos \theta$



24)  $\cos \theta$



## Trig Ratios of General Angles

Date \_\_\_\_\_ Period \_\_\_\_\_

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

1)  $\cos 101^\circ$   
 $-0.1908$

2)  $\cos 310^\circ$   
 $0.6428$

3)  $\sin 105^\circ$   
 $0.9659$

4)  $\sin -305^\circ$   
 $0.8192$

5)  $\sin -228^\circ$   
 $0.7431$

6)  $\sin -120^\circ$   
 $-0.8660$

7)  $\cos -70^\circ$   
 $0.3420$

8)  $\cos 140^\circ$   
 $-0.7660$

**Find the exact value of each trigonometric function. Some may be undefined.**

9)  $\cot -\frac{2\pi}{3}$   
 $\frac{\sqrt{3}}{3}$

10)  $\sin -\frac{11\pi}{6}$   
 $\frac{1}{2}$

11)  $\csc \frac{5\pi}{3}$   
 $-\frac{2\sqrt{3}}{3}$

12)  $\sec 0$   
 $1$

13)  $\tan -\frac{5\pi}{4}$   
 $-1$

14)  $\sec -120^\circ$   
 $-2$

15)  $\csc -315^\circ$   
 $\sqrt{2}$

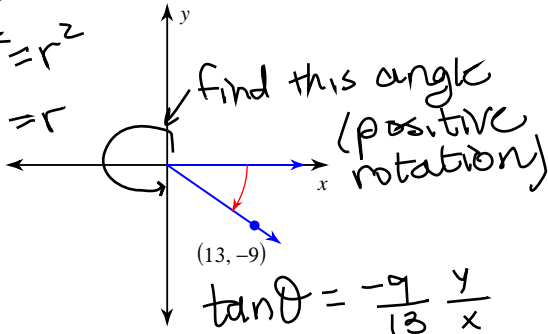
16)  $\csc 0$   
 $\text{Undefined}$

Find exact values for the given ratios Then find the angle in standard position

17)  $\sec \theta$

$$x^2 + y^2 = r^2$$

$$5\sqrt{10} = r$$



$$\sec \theta = \frac{r}{x}$$

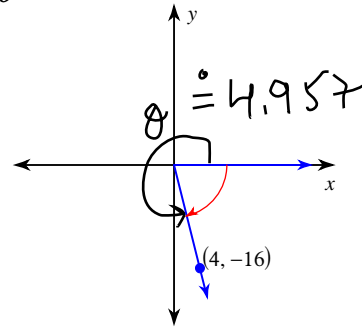
$$= \frac{5\sqrt{10}}{13}$$

$$\tan \theta = \frac{-9}{13} = \frac{y}{x}$$

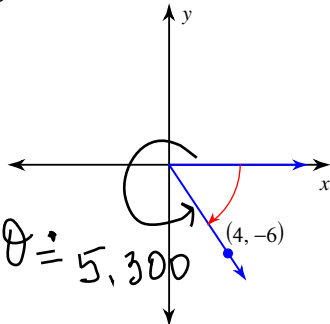
$$\text{rough: } \tan^{-1}\left(\frac{-9}{13}\right) = -0.605 \quad \frac{-4\sqrt{17}}{17}$$

$$\therefore \theta \approx 5.678$$

18)  $\sin \theta$

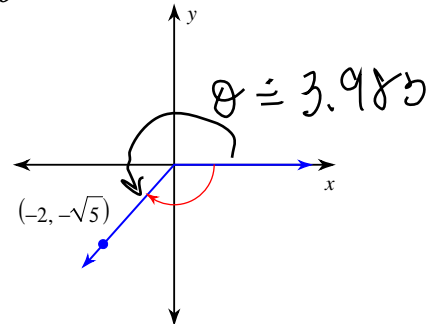


19)  $\cos \theta$



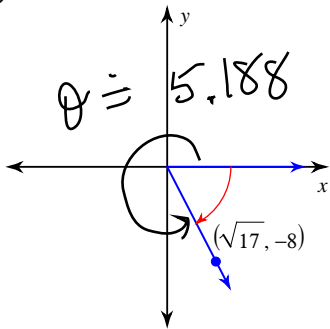
$$\frac{2\sqrt{13}}{13}$$

20)  $\cos \theta$



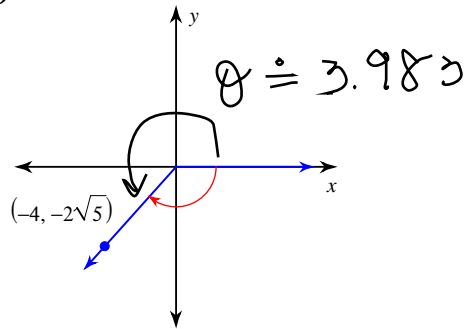
$$-\frac{2}{3}$$

21)  $\csc \theta$



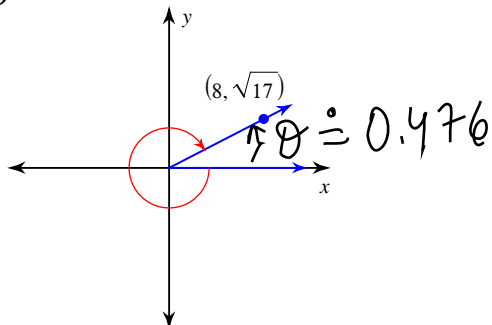
$$-\frac{9}{8}$$

22)  $\sin \theta$



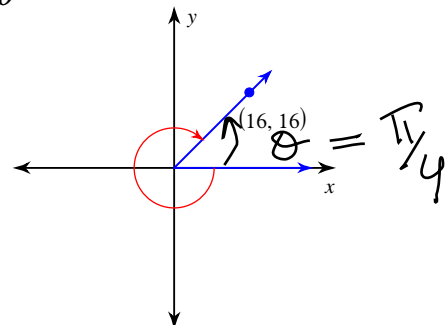
$$-\frac{\sqrt{5}}{3}$$

23)  $\cos \theta$



$$\frac{8}{9}$$

24)  $\cos \theta$



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