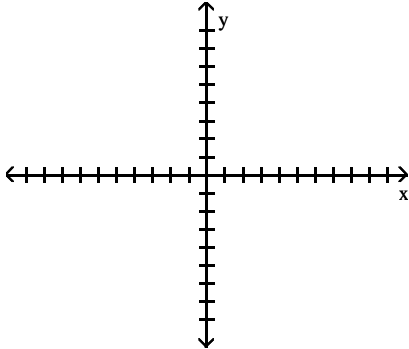
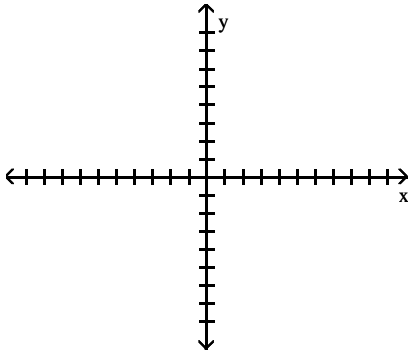


Sketch an angle θ in standard position such that θ has the smallest positive measure and the given point is on the terminal side of θ .

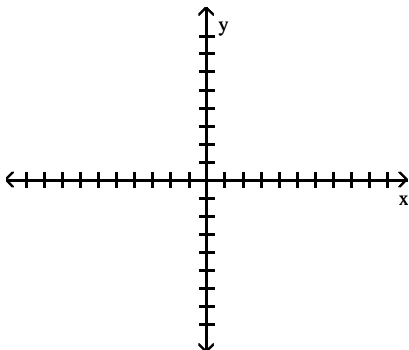
1) (3, 6)



2) (-5, -3)



3) (0, -5)



Suppose that θ is in standard position and the given point is on the terminal side of θ . Give the exact value of the indicated trig function for θ .

4) (3, 4); Find $\sin \theta$.

5) (15, 20); Find $\csc \theta$.

6) (-3, 8); Find $\tan \theta$.

7) (18, 24); Find $\cos \theta$.

If r is a positive number and the point (x, y) is in the indicated quadrant, decide whether the given ratio is positive or negative.

8) II, $\frac{r}{x}$

9) IV, $\frac{x}{y}$

10) IV, $\frac{r}{y}$

A is an angle in standard position and satisfies the given conditions. Find the indicated trigonometric function value of A. Do not use a calculator.

- 11) The terminal side of A is in quadrant I and lies on the line $y = 9x$. Find $\sin A$.

Use the appropriate identity to find the indicated function value. Rationalize the denominator, if applicable. If the given value is a decimal, round your answer to three decimal places.

17) $\csc \theta$, if $\sin \theta = \frac{1}{9}$

18) $\cos \theta$, if $\sec \theta = -4$

19) $\tan \theta$, if $\cot \theta = -\frac{2}{3}$

20) $\cot \theta$, if $\tan \theta = 0.1044$

21) $\csc \theta$, if $\sin \theta = -0.0559$

Evaluate the expression.

12) $\sin^2 90^\circ + \cos^2 90^\circ$

13) $\cos 0^\circ - 8 \sin 90^\circ$

14) $\cot 270^\circ + 8 \cos 180^\circ + 5 \sec^2 360^\circ$

Without using a calculator, decide which is greater.

22) $\sin 178^\circ$ or $\tan 178^\circ$

23) $\csc 17^\circ$ or $\cos 17^\circ$

24) $\cos 118^\circ$ or $\cos 119^\circ$

If n is an integer, $n \cdot 180^\circ$ represents an integer multiple of 180° , and $(2n + 1) \cdot 90^\circ$ represents an odd integer multiple of 90° . Decide whether the expression is equal to 0, 1, -1, or is undefined.

15) $\sin(n \cdot 180^\circ)$

16) $\sec((2n + 1) \cdot 90^\circ)$

Use the fundamental identities to find the value of the trigonometric function.

25) Find $\sin \theta$ if $\cos \theta = \frac{2}{3}$ and θ is in quadrant IV.

26) Find $\tan \theta$ if $\sin \theta = \frac{3}{4}$ and θ is in quadrant II.

Provide an appropriate response.

29) Explain what is wrong with this problem: Find $\csc \theta$, given that $\sin \theta = \frac{4}{3}$.

27) Find $\cot \theta$ if $\tan \theta = \frac{\sqrt{7}}{3}$ and θ is in quadrant

III.

30) If, for some particular angle θ , $\sin \theta > 0$ and $\cos \theta < 0$, in what quadrant must θ lie? What is the sign of $\tan \theta$?

28) Find $\sec \theta$ if $\tan \theta = 2.0503038$ and θ is in quadrant I.