

13-3 Skills Practice**Trigonometric Functions of General Angles**

Find the exact values of the six trigonometric functions of θ if the terminal side of θ in standard position contains the given point.

1. (5, 12)

2. (3, 4)

3. (8, -15)

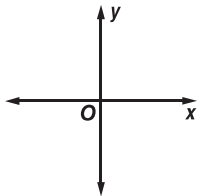
4. (-4, 3)

5. (-9, -40)

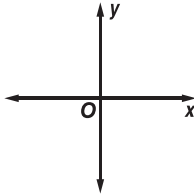
6. (1, 2)

Sketch each angle. Then find its reference angle.

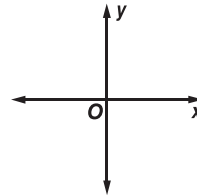
7. 135°



8. 200°



9. $\frac{5\pi}{3}$



Find the exact value of each trigonometric function.

10. $\sin 150^\circ$

11. $\cos 270^\circ$

12. $\cot 135^\circ$

13. $\tan (-30^\circ)$

14. $\tan \frac{\pi}{4}$

15. $\cos \frac{4\pi}{3}$

16. $\cot (-\pi)$

17. $\sin \left(-\frac{3\pi}{4}\right)$

Suppose θ is an angle in standard position whose terminal side is in the given quadrant. For each function, find the exact values of the remaining five trigonometric functions of θ .

18. $\sin \theta = \frac{4}{5}$, Quadrant II

19. $\tan \theta = -\frac{12}{5}$, Quadrant IV