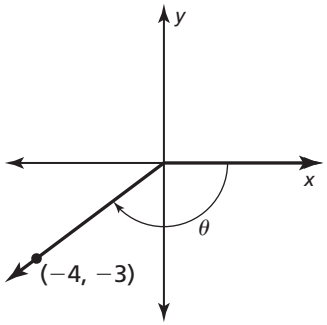
Name_____ Date _____

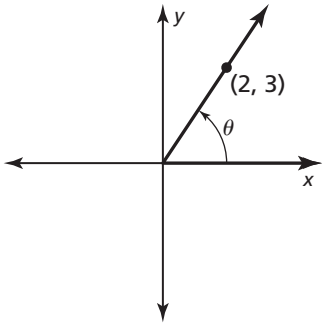
8.3 Practice B

In Exercises 1–4, evaluate the six trigonometric functions of θ.

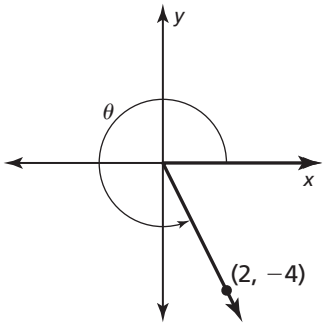
1.



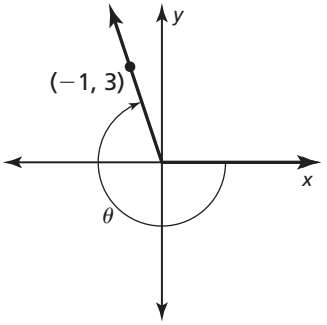
2.



3.



4.



In Exercises 5–7, use the unit circle to evaluate the six trigonometric functions of θ.

5. 5π **6.** $-720°$ **7.** $-\frac{5\pi}{2}$

In Exercises 8–13, find the angle's reference angle.

8. $-250°$ **9.** $110°$ **10.** $-310°$

11. $\frac{13\pi}{4}$ **12.** $\frac{11\pi}{6}$ **13.** $-\frac{13\pi}{3}$

In Exercises 14–16, evaluate the function without using a calculator.

14. $\cot 240°$ **15.** $\sin 315°$ **16.** $\sec\left(-\frac{5\pi}{6}\right)$

17. The horizontal distance d (in feet) traveled by a projectile launched at an angle θ and with an initial speed v (in feet per second) is given by $d = \frac{v^2}{32} \sin 2\theta$. To win a shot-put competition, your last throw must travel a horizontal distance of at least 15 feet. You release the shot put at a $45°$ angle with an initial speed of 22 feet per second. Do you win the competition? Justify your answer.