

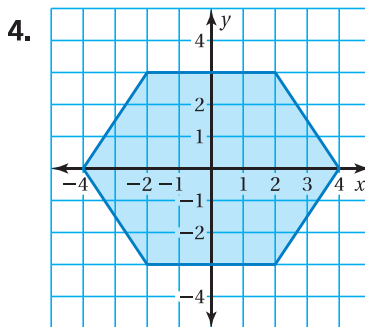
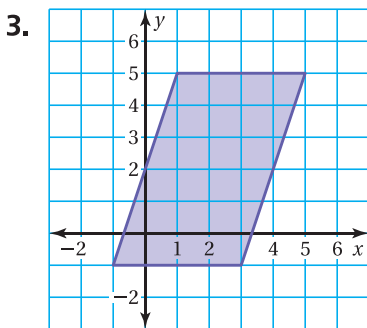
3.1 Exercises

Vocabulary and Concept Check

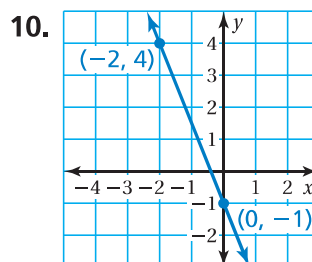
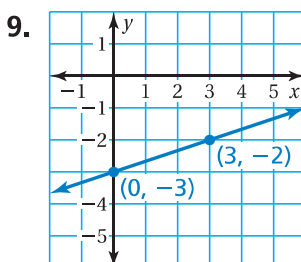
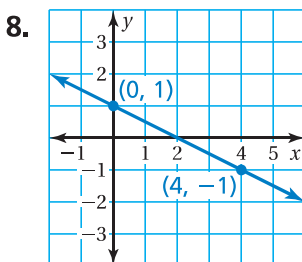
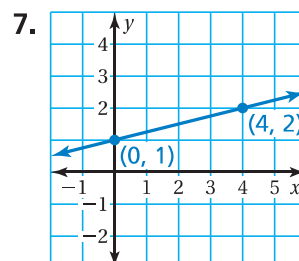
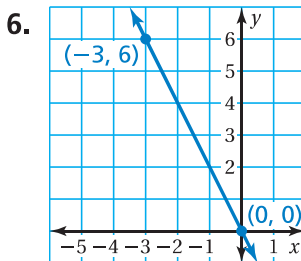
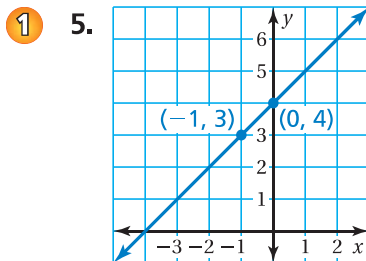
- WRITING** Explain how to find the slope of a line given the intercepts of the line.
- WRITING** Explain how to write an equation of a line using its graph.

Practice and Problem Solving

Write an equation for each side of the figure.

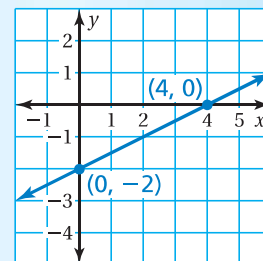


Write an equation of the line in slope-intercept form.



11. **ERROR ANALYSIS** Describe and correct the error in writing the equation of the line.

X $y = \frac{1}{2}x + 4$



12. **BOA** A boa constrictor is 18 inches long at birth and grows 8 inches per year. Write an equation that represents the length y (in feet) of a boa constrictor that is x years old.

Write an equation of the line that passes through the points.

- 2 13. $(2, 5), (0, 5)$ 14. $(-3, 0), (0, 0)$ 15. $(0, -2), (4, -2)$

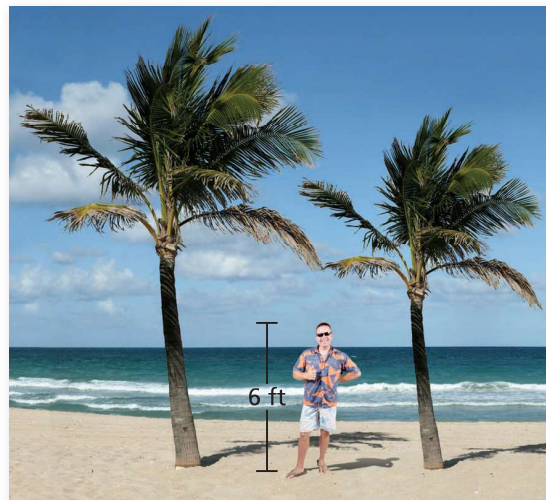
16. **WALKATHON** One of your friends gives you \$10 for a charity walkathon. Another friend gives you an amount per mile. After 5 miles, you have raised \$13.50 total. Write an equation that represents the amount y of money you have raised after x miles.



17. **BRAKING TIME** During each second of braking, an automobile slows by about 10 miles per hour.
- Plot the points $(0, 60)$ and $(6, 0)$. What do the points represent?
 - Draw a line through the points. What does the line represent?
 - Write an equation of the line.

18. **PAPER** You have 500 sheets of notebook paper. After 1 week, you have 72% of the sheets left. You use the same number of sheets each week. Write an equation that represents the number y of pages remaining after x weeks.

19. **Critical Thinking** The palm tree on the left is 10 years old. The palm tree on the right is 8 years old. The trees grow at the same rate.
- Estimate the height y (in feet) of each tree.
 - Plot the two points (x, y) , where x is the age of each tree and y is the height of each tree.
 - What is the rate of growth of the trees?
 - Write an equation that represents the height of a palm tree in terms of its age.



Fair Game Review What you learned in previous grades & lessons

Plot the ordered pair in a coordinate plane. (*Skills Review Handbook*)

20. $(1, 4)$ 21. $(-1, -2)$ 22. $(0, 1)$ 23. $(2, 7)$

24. **MULTIPLE CHOICE** Which of the following statements is true? (*Section 2.3*)

- The x -intercept is 5.
- The x -intercept is -2 .
- The y -intercept is 5.
- The y -intercept is -2 .

