✓ Vocabulary and Concept Check
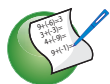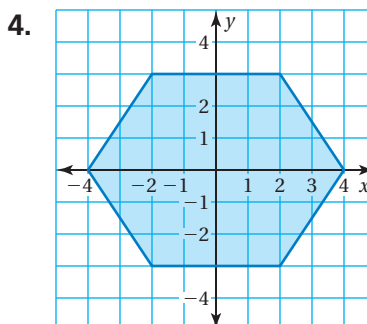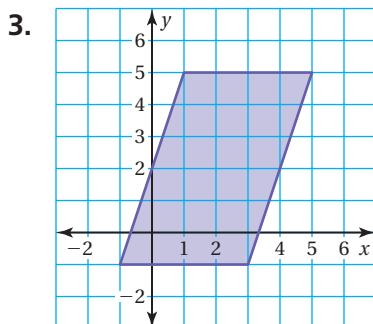
1. **PRECISION** Explain how to find the slope of a line given the intercepts of the line.

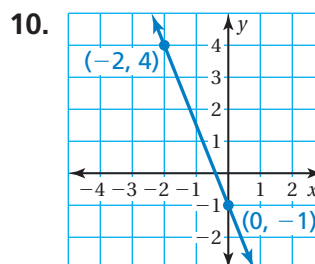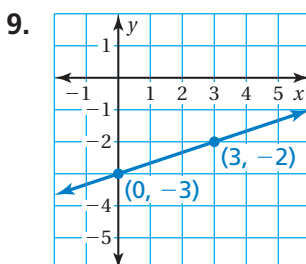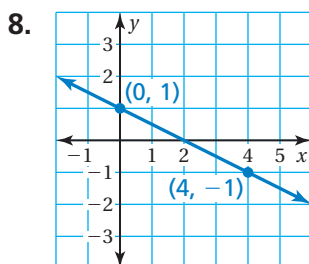2. **WRITING** Explain how to write an equation of a line using its graph.

Practice and Problem Solving

Write an equation that represents each side of the figure.

3.

4.

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

5.

6.

7.

8.

9.

10.
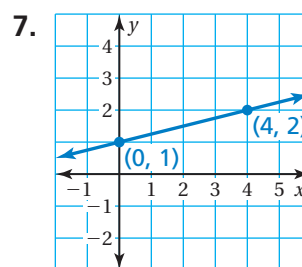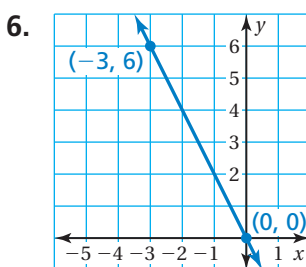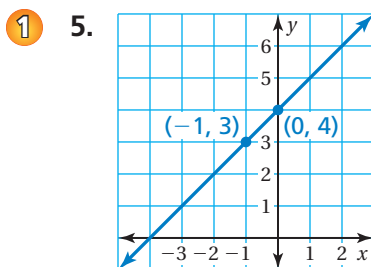
11. **ERROR ANALYSIS** Describe and correct the error in writing an equation of the line.

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

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.** $(0, -2), (4, -2)$

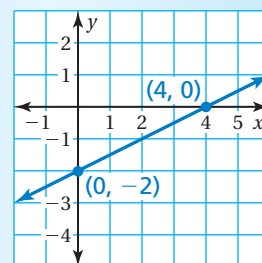**16.** **WALKATHON** One of your friends gives you $10 for a charity walkathon. Another friend gives you an amount per mile. After 5 miles, you have raised $13.50 total. Write an equation that represents the amount y of money you have raised after x miles.

17. **BRAKING TIME** During each second of braking, an automobile slows by about 10 miles per hour.

   a. Plot the points $(0, 60)$ and $(6, 0)$. What do the points represent?

   b. Draw a line through the points. What does the line represent?

   c. 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.

   a. Estimate the height y (in feet) of each tree.

   b. Plot the two points (x, y), where x is the age of each tree and y is the height of each tree.

   c. What is the rate of growth of the trees?

   d. Write an equation that represents the height of a palm tree in terms of its age.

6 ft

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 4.4)*

   A The x-intercept is 5.

   B The x-intercept is -2.

   C The y-intercept is 5.

   D The y-intercept is -2.