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

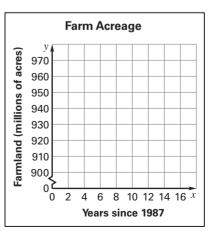
4. (-4.5, -22), (6, 30.5) **5.** (-10, 7), (5, -2) **6.** (-6, -10), (9, 10)

Write an equation for the linear function f with the given values.

7. f(-2) = 4.2, f(6) = -8.68. f(-4) = -10, f(3) = -89. f(-1.2) = 5, f(3.6) = 810. $f(\frac{1}{2}) = -4, f(-\frac{5}{2}) = -16$ 11. f(0.7) = -1.35, f(4.3) = 7.6512. f(1) = -6.6, f(-4) = 10

Decide whether the three points lie on the same line. *Explain* how you know. If the points do lie on the same line, write an equation of the line that passes through all three points.

- **13.** (3, 7), (-2, -8), (7, -19) **14.** (-3, 13), (8, -9), (-8, 23)
- **15.** A line passes through the points (3, 16), (-2, -14), and (h, 28). Find the value of *h*. *Explain* your steps.
- **16.** Car Wash You are scheduled to start your job at a car wash 2 hours after the car wash opens. Three hours after you start, a total of 47 cars have been washed since the car wash opened. Three hours later, a total of 55 cars have been washed. At what rate are the cars being washed? How many cars were washed before you started work?
- **17. Classified Ad** A newspaper charges a flat rate to place a 3-line ad in the classified section of the newspaper and then charges a per line fee for any additional lines. One person placed a 4-line ad for \$17.10 and another person placed a 6-line ad for \$22.50. Write an equation that gives the total cost (in dollars) as a function of the number of lines in the ad. What do the rate of change and initial value in your equation represent? *Explain* your answer using unit analysis.
- **18.** Farm Acreage The number of acres of farmland in the United States has decreased at a relatively constant rate of 3.27 million acres per year from 1987 to 1997. In 1997, there were 931.8 million acres of farmland.
 - **a.** Write an equation that gives the number of acres of farmland as a function of the number of years since 1987.
 - **b.** Graph the equation from part (a). *Explain* what the slope and *y*-intercept of the graph mean in this situation.
 - **c.** Predict when the number of acres will fall below 915 million acres.

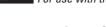




Name

For use with the lesson "Use Linear Equations in Slope-Intercept Form"

Write an equation of the line that passes through the given points and has slope *m*.



1. (-5, -2): m = 8

Date

2. (4.5, -3); m = 0.5 **3.** $(6, -1); m = -\frac{5}{6}$