

Graph each relation and find the domain and range. Then determine whether the relation is a function.

- $\{(-4, -8), (-2, 2), (0, 5), (2, 3), (4, -9)\}$
- $y = 3x - 3$

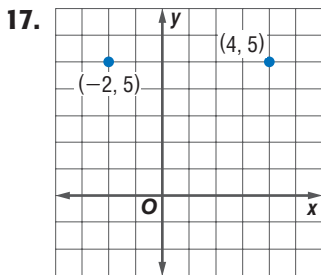
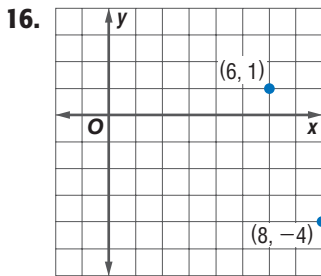
Find each value.

- $f(3)$  if  $f(x) = 7 - x^2$
- $f(0)$  if  $f(x) = x - 3x^2$

Graph each equation or inequality.

- $y = \frac{3}{5}x - 4$
- $x = -4$
- $f(x) = 3x - 1$
- $g(x) = |x + 2|$
- $-2x + 5 \leq 3y$
- $h(x) = \begin{cases} x + 2 & \text{if } x < -2 \\ 2x - 1 & \text{if } x \geq -2 \end{cases}$
- $4x - y = 2$
- $y = 2x - 5$
- $f(x) = \lceil 3x \rceil + 3$
- $y \leq 10$
- $y < 4|x - 1|$

Find the slope of the line that passes through each pair of points.



- $(5, 7), (4, -6)$
- $(1, 0), (3, 8)$

Graph the line passing through the given point with the given slope.

- $(1, -3), 2$
- $(-2, 2), -\frac{1}{3}$
- $(3, -2), \text{undefined}$

Write an equation in slope-intercept form for the line that satisfies each set of conditions.

- slope  $-5$ ,  $y$ -intercept  $11$
- $x$ -intercept  $9$ ,  $y$ -intercept  $-4$
- passes through  $(-6, 15)$ , parallel to the graph of  $2x + 3y = 1$
- passes through  $(5, 2)$ , perpendicular to the graph of  $x + 3y = 7$

**RECREATION** For Exercises 27–29, use the table that shows the amount Americans spent on admission to spectator amusements in some recent years.

Year	Amount (billion \$)
2000	30.4
2001	32.2
2002	34.6
2003	35.6

Source: Bureau of Economic Analysis, U.S. Dept. of Commerce

- Draw a scatter plot. Let  $x$  represent the number of years since 2000.
- Write a prediction equation.
- Predict the amount that will be spent on recreation in 2015.
- MULTIPLE CHOICE** What is the slope of a line parallel to  $y - 2 = 4(x + 1)$ ?
  - $-4$
  - $-\frac{1}{4}$
  - $\frac{1}{4}$
  - $4$