**WRITING LINEAR FUNCTIONS** Write an equation for a linear function f that has the given values.

**23.** 
$$f(-2) = 15$$
,  $f(1) = 9$ 

**24.** 
$$f(-2) = -2$$
,  $f(4) = -8$ 

**25.** 
$$f(2) = 7$$
,  $f(4) = 6$ 

**26.** 
$$f(-4) = -8$$
,  $f(-8) = -11$ 

**27.** 
$$f(3) = 1$$
,  $f(6) = 4$ 

**28.** 
$$f(-5) = 9$$
,  $f(11) = -39$ 

**29. TAKS REASONING** Which function has the values f(4) = -15 and f(7) = 57?

**(A)** 
$$f(x) = 14x - 71$$

**B**) 
$$f(x) = 24x - 1361$$

**©** 
$$f(x) = 24x + 360$$

**D** 
$$f(x) = 24x - 111$$

**USING A TABLE OR DIAGRAM** Write an equation that represents the linear function shown in the table or mapping diagram.

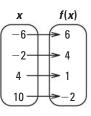
30.

X	f(x)
-4	6
4	4
8	3
12	2

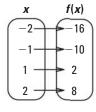
31.

X	f(x)
-3	8
3	4
6	2
9	0

32



33.



**TAKS REASONING** Tell whether the given information is enough to write an equation of a line. *Justify* your answer.

**34.** Two points on the line

**35.** The slope and a point on the line

**36.** The slope of the line

**37.** Both intercepts of the line

**USING A GRAPH** In Exercises 38–41, use the graph at the right.

**38.** Write an equation of the line shown.

**39.** Write an equation of a line that has the same *y*-intercept as the line shown but has a slope that is 3 times the slope of the line shown.

1 (-1, -2)

- **40.** Write an equation of a line that has the same slope as the line shown but has a *y*-intercept that is 6 more than the *y*-intercept of the line shown.
- **41. WRITING** Which of the lines from Exercises 38–40 intersect? Which of the lines never intersect? *Justify* your answers.

**REASONING** 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.

**42.** 
$$(-4, -2)$$
,  $(2, 2.5)$ ,  $(8, 7)$ 

**46. CHALLENGE** A line passes through the points (-2, 3), (2, 5), and (6, k). Find the value of k. *Explain* your steps.

(3, 4)