

13. **TAKS REASONING** Given $f(x) = -6.8x + 5$, what is the value of $f(-2)$?

- (A) -18.6 (B) -8.6 (C) 8.6 (D) 18.6

EXAMPLE 2

on p. 262
for Exs. 14–22

FINDING X-VALUES Find the value of x so that the function has the given value.

14. $f(x) = 6x + 9$; 3

15. $g(x) = -x + 5$; 2

16. $h(x) = -7x + 12$; -9

17. $j(x) = 4x + 11$; -13

18. $m(x) = 9x - 5$; -2

19. $n(x) = -2x - 21$; -6

20. $p(x) = -12x - 36$; -3

21. $q(x) = 8x - 32$; -4

22. **TAKS REASONING** What value of x makes $f(x) = 5$ if $f(x) = -2x + 25$?

- (A) -15 (B) -10 (C) 10 (D) 15

EXAMPLE 4

on p. 264
for Exs. 23–34

TRANSFORMATIONS OF LINEAR FUNCTIONS Graph the function. Compare the graph with the graph of $f(x) = x$.

23. $g(x) = x + 5$

24. $h(x) = 6 + x$

25. $q(x) = x - 1$

26. $m(x) = x - 6$

27. $d(x) = x + 7$

28. $t(x) = x - 3$

29. $r(x) = 4x$

30. $w(x) = 5x$

31. $h(x) = -3x$

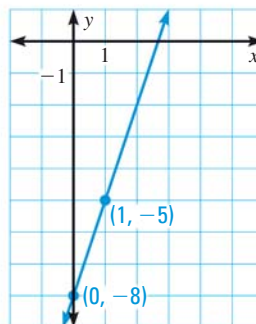
32. $k(x) = -6x$

33. $g(x) = \frac{1}{3}x$

34. $m(x) = -\frac{7}{2}x$

35. **TAKS REASONING** The graph of which function is shown?

- (A) $f(x) = 3x + 8$
(B) $f(x) = 3x - 8$
(C) $f(x) = 8x + 3$
(D) $f(x) = 8x - 3$



36. **TAKS REASONING** In this exercise you will compare the graphs of linear functions when their slopes and y -intercepts are changed.

- a. Choose a linear function of the form $f(x) = mx + b$ where $m \neq 0$. Then graph the function.
- b. Using the same m and b values as in part (a), graph the function $g(x) = 2mx + b$. How are the slope and y -intercept of the graph of g related to the slope and y -intercept of the graph of f ?
- c. Using the same m and b values as in part (a), graph the function $h(x) = mx + (b - 3)$. How are the slope and y -intercept of the graph of h related to the slope and y -intercept of the graph of f ?

37. **REASONING** How is the graph of $g(x) = 1$ related to the graph of $h(x) = -1$?

38. **CHALLENGE** Suppose that $f(x) = 4x + 7$ and $g(x) = 2x$. What is a rule for $g(f(x))$? What is a rule for $f(g(x))$?