

**LESSON**  
**3.7****Practice B**

For use with the lesson "Graph Linear Functions"

**Evaluate the function when  $x = -3, 0,$  and  $2.$** 

1.  $f(x) = 15x + 4$

2.  $g(x) = -9x + 1$

3.  $p(x) = -7x - 5$

4.  $h(x) = 3.25x$

5.  $m(x) = -4.4x$

6.  $f(x) = 6.1x - 3.3$

7.  $s(x) = \frac{4}{5}x - 2$

8.  $d(x) = -\frac{5}{3}x + 4$

9.  $h(x) = \frac{3}{8}x - 6$

10.  $f(x) = -2.5x + 7$

11.  $h(x) = 4.2x - 3$

12.  $g(x) = 6.1x - 2.2$

**Find the value of  $x$  so that the function has the given value.**

13.  $f(x) = 4x - 2; 18$

14.  $n(x) = 7x + 4; 39$

15.  $q(x) = 6 - 5x; 21$

16.  $g(x) = -3x + 8; 14$

17.  $h(x) = 9x - 13; 23$

18.  $m(x) = 12x - 30; 30$

19.  $s(x) = -4x - 9; 3$

20.  $m(x) = 8.5x - 3; 82$

21.  $p(x) = -2.4x + 6; 18$

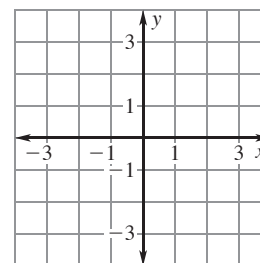
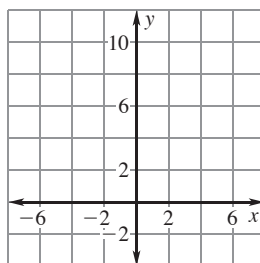
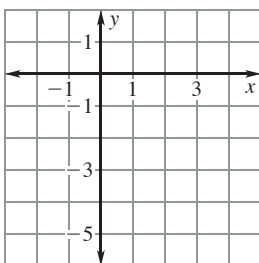
22.  $d(x) = 3.3x - 1.1; 31.9$

**Graph the function. Compare your graph to the graph of  $f(x) = x.$** 

23.  $h(x) = x - 4$

24.  $g(x) = x + 7$

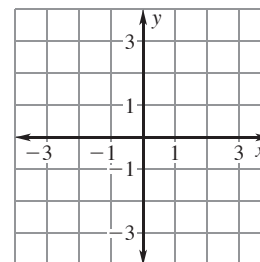
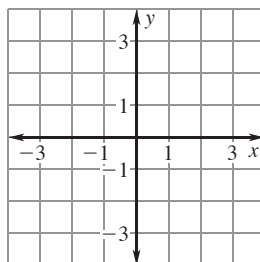
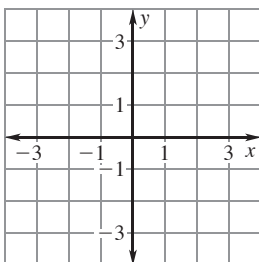
25.  $m(x) = 5x$



26.  $m(x) = 8x$

27.  $p(x) = \frac{1}{3}x$

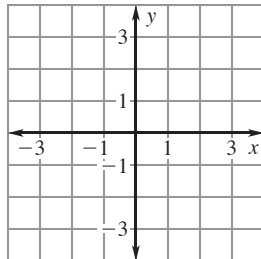
28.  $n(x) = -2x$



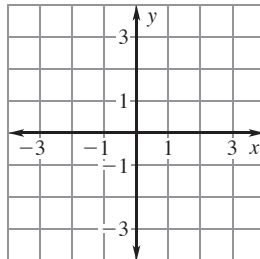
**LESSON**  
**3.7**

**Practice B** *continued*  
For use with the lesson "Graph Linear Functions"

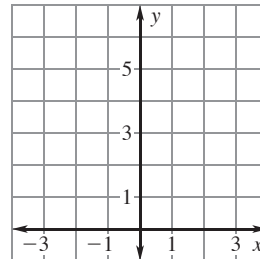
29.  $p(x) = -\frac{1}{4}x$



30.  $d(x) = x - 1.5$



31.  $g(x) = x + 4.5$



**Match the function with the description of its graph in relation to the graph of  $f(x) = x$ .**

32.  $g(x) = 4x$

**A.** graph of  $f$  shifted up 4 units

33.  $g(x) = x + 4$

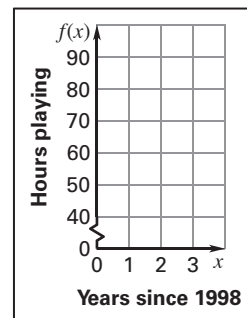
**B.** graph of  $f$  shifted down 4 units

34.  $g(x) = x - 4$

**C.** graph of  $f$  dilated by factor of 4

35. **Video Games** The number of hours people in the United States spent playing video games each year from 1998 to 2001 can be modeled by the function  $f(x) = 11.9x + 46.4$  where  $x$  is the number of years since 1998.

- a. Graph the function and identify its domain and range.
- b. Find the value of  $f(x)$  when  $x = 2$ . *Explain* what the solution means in this situation.
- c. Find the value of  $x$  so that  $f(x) = 60$ . *Explain* what the solution means in this situation.



36. **Pool Membership** A pool membership during the summer costs \$7 per week. The total cost of a membership is given by  $f(x) = 7x$ . The pool also rents out lockers for \$2 per week. The total cost of a membership and a rental is given by  $g(x) = 9x$ .

- a. Graph both functions. How is the graph of  $f$  related to the graph of  $g$ ?
- b. What is the difference between a 12-week membership if you get a locker and if you don't? *Explain* how you got your answer.

