

## 5.5 PRACTICE

⊕

Evaluate the functions.

1.  $f(x) = 12x + 1$

$$f(-2) = 12(-2) + 1 \quad f(-2) = -23$$

$$\begin{array}{r} -24 + 1 \\ \hline -23 \end{array}$$

$$f(0) = 12(0) + 1 \quad f(0) = 1$$

$$\begin{array}{r} 0 + 1 \\ \hline 1 \end{array}$$

$$f(3) = 12(3) + 1 \quad f(3) = 37$$

$$\begin{array}{r} 36 + 1 \\ \hline 37 \end{array}$$

2.  $p(x) = -8x - 2$

$$p(-2) = -8(-2) - 2 \quad p(-2) = 14$$

$$\begin{array}{r} 16 - 2 \\ \hline 14 \end{array}$$

$$p(0) = -8(0) - 2 \quad p(0) = -2$$

$$\begin{array}{r} 0 - 2 \\ \hline -2 \end{array}$$

$$p(3) = -8(3) - 2 \quad p(3) = -26$$

$$\begin{array}{r} -24 - 2 \\ \hline -26 \end{array}$$

3.  $m(x) = -6.5x$

$$m(-2) = -6.5(-2) \quad m(-2) = 13$$

$$\begin{array}{r} 13 \\ \hline \end{array}$$

$$m(0) = -6.5(0) \quad m(0) = 0$$

$$\begin{array}{r} 0 \\ \hline \end{array}$$

$$m(3) = -6.5(3) \quad m(3) = -19.5$$

$$\begin{array}{r} -19.5 \\ \hline \end{array}$$

4.  $s(x) = \frac{2}{5}x + 3$

$$s(-2) = \frac{2}{5}(-2) + 3 \quad \frac{-4}{5} + \frac{15}{5} = \frac{11}{5}$$

$$\begin{array}{r} -4 + 15 \\ \hline 11 \\ \hline 5 \end{array} \quad s(-2) = \frac{11}{5}$$

$$s(0) = \frac{2}{5}(0) + 3 \quad s(0) = 3$$

$$\begin{array}{r} 0 + 3 \\ \hline 3 \end{array}$$

$$s(3) = \frac{2}{5}(3) + 3 \quad s(3) = \frac{21}{5}$$

$$\begin{array}{r} 6 + 3 \\ \hline 9 \\ \hline 5 \end{array} \quad \frac{6}{5} + \frac{15}{5} = \frac{21}{5}$$

5.  $h(x) = \frac{3}{4}x - 6$

$$h(-2) = \frac{3}{4}(-2) - 6 \quad \frac{-6}{4} - \frac{24}{4} = \frac{-30}{4} = \frac{-15}{2}$$

$$\begin{array}{r} -6 - 24 \\ \hline -30 \\ \hline 4 \end{array} \quad h(-2) = \frac{-15}{2}$$

$$h(0) = \frac{3}{4}(0) - 6 \quad h(0) = -6$$

$$\begin{array}{r} 0 - 6 \\ \hline -6 \end{array}$$

$$h(3) = \frac{3}{4}(3) - 6 \quad h(3) = \frac{-15}{4}$$

$$\begin{array}{r} 9 - 6 \\ \hline 3 \\ \hline 4 \end{array} \quad \frac{9}{4} - 6$$

$$\frac{9}{4} - \frac{24}{4} = \frac{-15}{4}$$

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

6.  $g(x) = -x + 5$

Find  $x$  when  $g(x) = 2$

$x = 3$

$$\begin{aligned} 2 &= -x + 5 \\ -5 & \quad -5 \\ \hline -3 &= -x \\ -1 & \quad -1 \\ \hline 3 &= x \end{aligned}$$

7.  $j(x) = 4x + 11$

Find  $x$  when  $j(x) = 13$

$x = \frac{1}{2}$

$$\begin{aligned} 13 &= 4x + 11 \\ -11 & \quad -11 \\ \hline 2 &= 4x \\ \frac{2}{4} &= \frac{4x}{4} \\ \frac{1}{2} &= x \end{aligned}$$

8.  $n(x) = -2x - 21$

Find  $x$  when  $n(x) = -6$

$x = \frac{-15}{2}$

$$\begin{aligned} -6 &= -2x - 21 \\ +21 & \quad +21 \\ \hline 15 &= -2x \\ -2 & \quad -2 \\ \hline -15 &= x \end{aligned}$$

9.  $q(x) = 8x - 32$

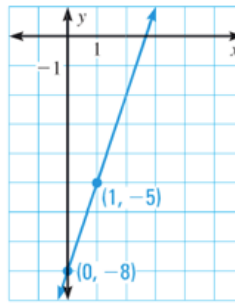
Find  $x$  when  $q(x) = -4$

$x = \frac{7}{2}$

$$\begin{aligned} -4 &= 8x - 32 \\ +32 & \quad +32 \\ \hline 28 &= 8x \\ \frac{28}{8} &= \frac{8x}{8} \\ \frac{7}{2} &= x \end{aligned}$$

10. ★ **MULTIPLE CHOICE** The graph of which function is shown?

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



$m = 3$   
 $b = -8$

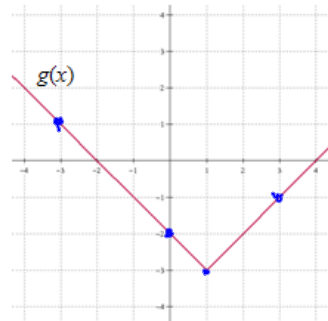
Use the given function to fill in the table.

11.  $f(x) = 5 - 3x$

$x$	$f(x)$
-5	20
$\frac{2}{3}$	3
4.5	-8.5
-4	17

$$\begin{aligned} 5 - 3(-5) &= 5 + 15 = 20 \\ 5 - 3\left(\frac{2}{3}\right) &= 5 - 2 = 3 \\ 5 - 3(4.5) &= 5 - 13.5 = -8.5 \\ 17 &= 5 - 3x \\ -5 & \quad -5 \\ \hline 12 &= -3x \\ -3 & \quad -3 \\ \hline -4 &= x \end{aligned}$$

12.



$x$	$g(x)$
-3	1
0	-2
3	-1
1	-3