# 5.5 PRACTICE

**Evaluate the functions.**

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

$f(-2) = 12(-2)+1$
$-24+1$
$-23$ $\quad f(-2) = -23$

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

$f(3) = 12(3)+1$
$36+1$
$37$ $\quad f(3) = 37$

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

$p(-2) = -8(-2)-2$
$16-2$
$14$ $\quad p(-2) = 14$

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

$p(3) = -8(3)-2$
$-24-2$
$-26$ $\quad p(3) = -26$

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

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

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

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

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

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

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

$s(3) = \frac{2}{5}(3)+3$
$\frac{6}{5}+3$
$\frac{6}{5}+\frac{15}{5} = \frac{21}{5}$ $\quad s(3) = \frac{21}{5}$

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

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

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

$h(3) = \frac{3}{4}(3)-6$
$\frac{9}{4}-6$
$\frac{9}{4}-\frac{24}{4} = \frac{-15}{4}$ $\quad h(3) = -\frac{15}{4}$

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

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

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

$2 = -x + 5$
$-5 \quad -5$
$-3 = -x$
$\frac{-3}{-1} = \frac{-x}{-1}$
$3 = x$

$x = 3$

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

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

$13 = 4x + 11$
$-11 \quad -11$
$\frac{2}{4} = \frac{4x}{4}$
$\frac{2}{4} = x$
$\frac{1}{2} = x$

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

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

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

$-6 = -2x - 21$
$+21 \quad +21$
$\frac{15}{-2} = \frac{-2x}{-2}$
$-\frac{15}{2} = x$

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

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

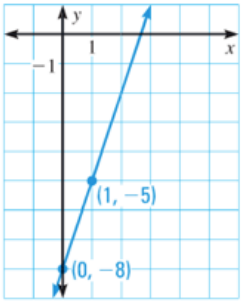
Find $x$ when $q(x) = -4$

$-4 = 8x - 32$
$+32 \quad +32$
$\frac{28}{8} = \frac{8x}{8}$
$\frac{7}{2} = x$

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

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

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




$m = 3$
$b = -8$

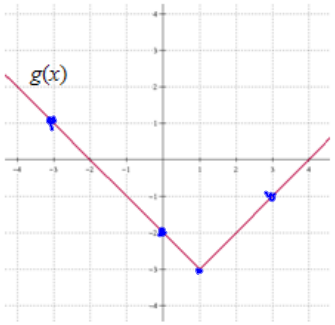
**Use the given function to fill in the table.**

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

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

$5 - 3(-5) = 5 + 15 = 20$
$5 - 3(\frac{2}{3}) = 5 - 2 = 3$
$5 - 3(4.5) = 5 - 13.5 = -8.5$
$17 = 5 - 3x$
$-5 \quad -5$
$\frac{12}{-3} = \frac{-3x}{-3}$
$-4 = x$

12.




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