Evaluate the functions.

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

$f(-2) = 12(-2) + 1$
  $-24 + 1$ $\boxed{f(-2) = -23}$
   -23

$f(0) = 12(0) + 1$
  $0 + 1$ $\boxed{f(0) = 1}$
   1

$f(3) = 12(3) + 1$
  $36 + 1$ $\boxed{f(3) = 37}$
   37

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

$p(-2) = -8(-2) - 2$
  $16 - 2$ $\boxed{p(-2) = 14}$
   14

$p(0) = \cdot -8(0) - 2$
  $0 - 2$ $\boxed{p(0) = -2}$
   -2

$p(3) = -8(3) - 2$
  $-24 - 2$ $\boxed{p(3) = -26}$
   -26

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

$m(-2) = -6.5(-2)$ $\boxed{m(-2) = 13}$
   13

$m(0) = -6.5(0)$ $\boxed{m(0) = 0}$
   0

$m(3) = -6.5(3)$
  -19.5 $\boxed{m(3) = -19.5}$

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

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

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

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

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

$h(-2) = \frac{3}{4}(-2) - 6$ $\frac{-6}{4} - \frac{24}{4} = \frac{-36}{4} = \frac{-15}{2}$
  $\frac{-6}{4} - 6$ $\boxed{h(-2) = \frac{-15}{2}}$

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

$h(3) = \frac{3}{4}(3) - 6$ $\boxed{h(3) = \frac{-5}{2}}$
  $\frac{9}{4} - 6$
  $\frac{9}{4} - \frac{24}{6} = \frac{-15}{6} = \frac{-5}{2}$

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

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

Find x when $g(x) = 2$

$\boxed{x = 3}$

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

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

Find x when $j(x) = 13$

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

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

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

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

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

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

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

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

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

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

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

Ⓐ $f(x) = 3x + 8$

Ⓑ $f(x) = 3x - 8$
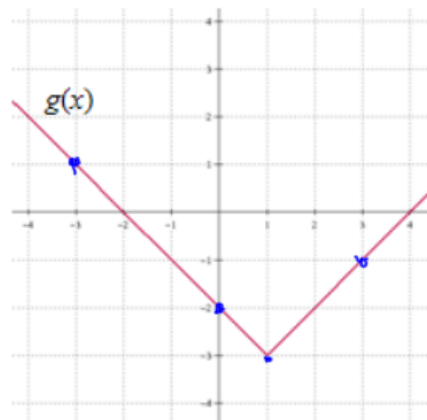
Ⓒ $f(x) = 8x + 3$

Ⓓ $f(x) = 8x - 3$

$(1, -5)$
$(0, -8)$
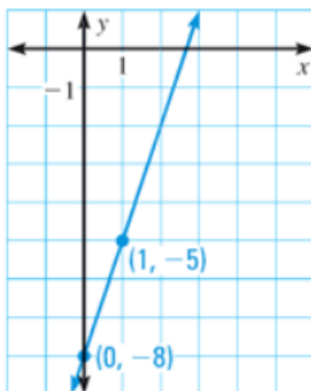
$m = 3$
$b = -8$

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

$5 - 3(-5) = 5 + 15 = 20$

$5 - 3(\frac{2}{3}) = 5 - 2 = 3$

$5 - 3(4.5) = 5 - 13.5 = -8.5$

$17 = 5 - 3x$
$-5 \quad -5$
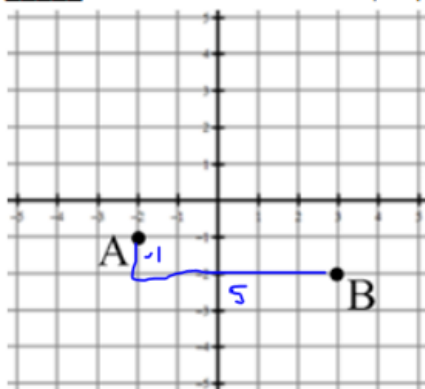$\frac{12}{-3} = \frac{-3x}{-3}$
$-4 = x$

12.

$g(x)$

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

SKILLZ REVIEW

GRAPH

1. Describe how to move from point A to point B.

___-1___ units in the y direction (rise)

___5___ units in the x direction (run)

A   -1
5   B

2. Describe how to move from point C(0,3) to point D(2,−3).

SIMPLIFY

3. $3(2x - 3) - 5$

$6x - 9 - 5$

$6x - 14$

4. $5x - 6(x - 2)$

SOLVE

5. $\frac{x+1}{2} = 17$ (2)

$x + 1 = 34$
$-1 \quad -1$

$x = 33$

6. $6x - 2 = 7x + 5$

For extra help, check the Skillz Review video!