

Coordinate Points Written in Function Notation:

(x, y)

$f(x) = y$

Write the coordinate point that is shown below.

Ex. 1: $f(-4) = 23$

$(-4, 23)$

Ex. 2: $f(0) = 4$

$(0, 4)$

Given the following picture represents $g(x)$, use the graph to find the following values.

Ex. 3: $g(5)$

$x=5$ $g(5) = 1$

Ex. 5: $g(x) = 8$

$y=8$ $g(-7) = 8$

Ex. 7: $g(x) = 6$

$g(-9) = 6$
 $g(-11.5) = 6$

Ex. 4: $g(-8)$

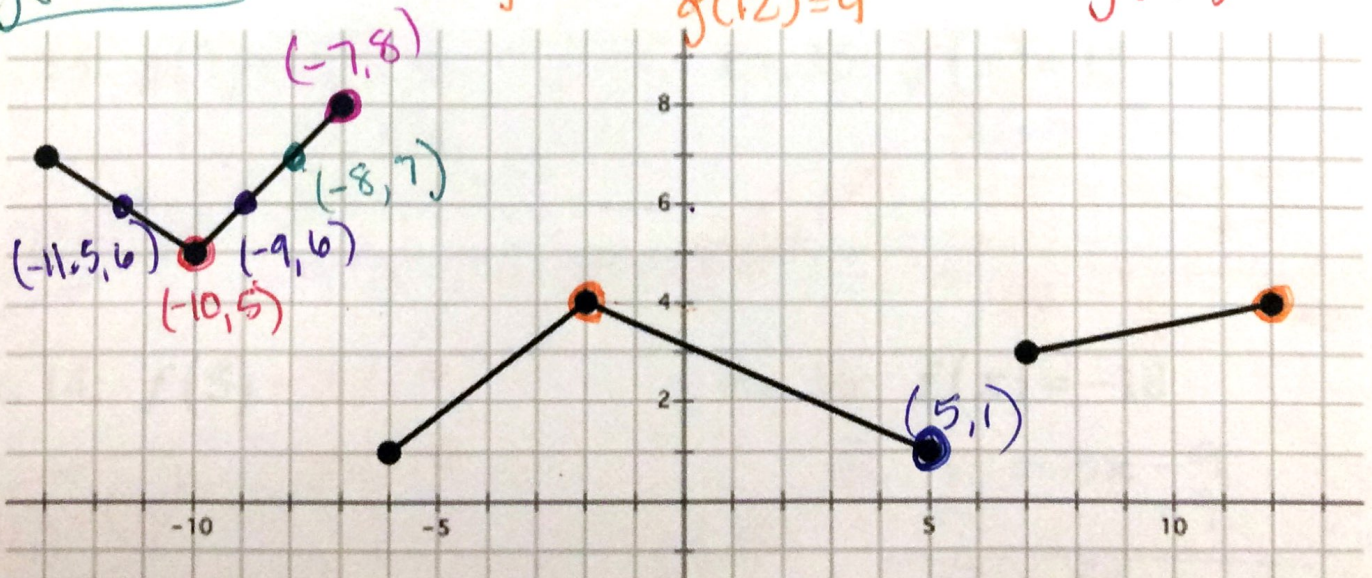
$x=-8$ $g(-8) = 7$

Ex. 6: $g(x) = 4$

$y=4$ $g(-2) = 4$
 $g(12) = 4$

Ex. 8: $g(x) = 5$

$g(-10) = 5$



Use the table to answer the following questions.

Ex. 9: $f(x) = y$
 $f(-1)$

$x=1$

$f(-1) = 4$

x	$f(x)$
-1	4
1	3
3	7
4	6
6	3
7	1

Ex. 10: $f(6)$

$f(6) = 3$

Ex. 11: $f(x) = 1$

$y=1$

$f(7) = 1$

Ex. 12: $f(x) = 3$

$f(6) = 3$

$f(1) = 3$

Given that $f(x) = 3x - 9$ and $g(x) = x^2 + 4$, find the following values.

Ex. 13: $g(7) = x^2 + 4$

$7^2 + 4$

$49 + 4$

53

Ex. 14: $f(5) = 3x - 9$

$= 3(5) - 9$

$= 15 - 9$

$= 6$

Ex. 15: $f(x) = 15$

$f(x) = 3x - 9$

$15 = 3x - 9$
 $+9$ $+9$

$\frac{24}{3} = \frac{3x}{3}$ $x = 8$

Ex. 16: $f(x) = -18$

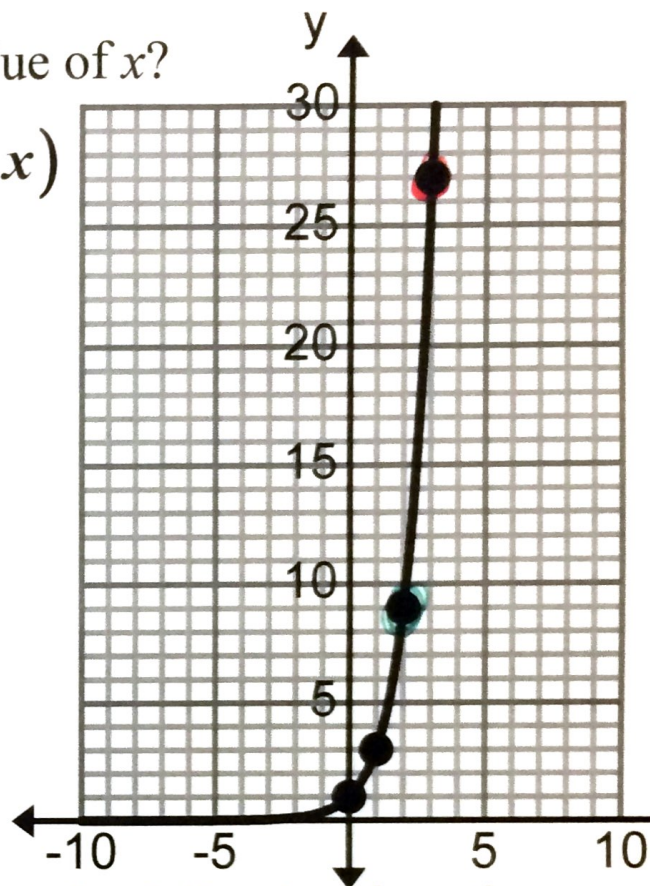
$-18 = 3x - 9$

$+9$ $+9$

$\frac{-9}{3} = \frac{3x}{3}$ $x = -3$

Ex. 17: If $g(x) = 27$, what is the value of x ?

$$g(3) = 27$$

 $g(x)$


Ex. 18: $g(2) =$

$$g(2) = 9$$

Use the following functions to evaluate the following function operations.

$$f(x) = 3x + 2, \quad g(x) = -2x + 7, \quad h(x) = x^2 - 3,$$

Ex. 19: $-5f(x) = -15x - 10$

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

$$-15x - 10$$

Ex. 20: $f(x) + h(x)$

$$3x + 2 + x^2 - 3$$

$$f(x) + h(x) = x^2 + 3x - 1$$

Ex. 21: $f(x) \cdot g(x) = -6x^2 + 17x + 14$

$$(3x + 2)(-2x + 7)$$

$$-6x^2 + 21x - 4x + 14$$

Use the following functions to evaluate the following function operations.

$$f(x) = 3x + 2, \quad g(x) = -2x + 7$$

Ex. 22: $f(x) - g(x) = 5x - 5$ subtracting & multiplying need

$$3x + 2 - (-2x + 7)$$

$$3x + 2 + 2x - 7$$

$$5x - 5$$

Ex. 23: $\frac{g(x) + 3}{4}$

$$\frac{-2x + 7 + 3}{4} = \frac{-2x + 10}{4}$$

$$= \frac{-2x}{4} + \frac{10}{4}$$

$$\frac{g(x) + 3}{4} = -\frac{1}{2}x + \frac{5}{2}$$

Ex. 24: $f(3) \cdot g(2) = 33$

$$3x + 2 \quad -2x + 7$$

$$(3(3) + 2) \cdot (-2(2) + 7)$$

$$(9 + 2) \cdot (-4 + 7)$$

$$(11) \cdot (3) = 33$$

Ex. 25: $f(x) = g(x)$

$$3x + 2 = -2x + 7$$

$$+2x - 2 \quad +2x - 2$$

$$\frac{5x}{5} = \frac{5}{5}$$

$$x = 1$$

$$f(1) = g(1)$$