

Warm up

1) $3x + 5y = -10$

~~$-3x - 7y = 6$~~

$$\begin{array}{r} 2y = -4 \\ \hline -2 \quad -2 \\ \hline y = 2 \end{array}$$

∴

$$\begin{array}{r} 5x + 10 = -10 \\ \hline -10 \quad -10 \\ \hline 3x = -20 \\ \hline 3 \quad 3 \\ \hline x = -6.6 \end{array}$$

$$\begin{array}{r} 3x = -20 \\ \hline 3 \quad 3 \\ \hline x = -6.6 \end{array}$$

$$x = -6.6$$

2) $5x - 6y = -8$

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

$$\begin{array}{r} 5x - 6y = -8 \\ 4x + 6y = -10 \\ \hline \end{array}$$

$$\begin{array}{r} 9x = -18 \\ \hline 9 \quad 9 \\ \hline x = -2 \end{array}$$

$$x = -2$$

$$-\frac{2}{2}$$

$$\begin{array}{r} 2(-2) + 3y = -5 \\ \hline \end{array}$$

$$\begin{array}{r} -4 + 3y = -5 \\ \hline +4 \quad +4 \\ \hline 3y = -1 \end{array}$$

$$\begin{array}{r} 3y = -1 \\ \hline 3 \quad 3 \\ \hline y = -\frac{1}{3} \end{array}$$

$$y = -\frac{1}{3}$$

4-3 Evaluating and Operations with Functions

Objective:

-I can evaluate functions from equations
and graphs

Vocabulary

Function: IS a relation between inputs + outputs

f(x) (said F of x): $f(x) = y$

Input: information $y = 3x + 7$

$$x = 7$$

Output: What comes back

$$y = 3(7) + 7$$

$$y = 21 + 7$$

$$y = 28$$

What is the difference between
 $f(x)$ and y ? *Nothing*

Identify the input and the output for each:

a. $f(2) = 3$ \leftarrow output
 \uparrow
 input

b. $f(-9) = 0$

c. $f(5) = -1$

Evaluating functions given the equation.

Given the function, $f(x) = -4x + 7$, find each value:

a. $f(2)$

$$\begin{aligned} & -4(2) + 7 \\ & -8 + 7 = -1 \end{aligned}$$

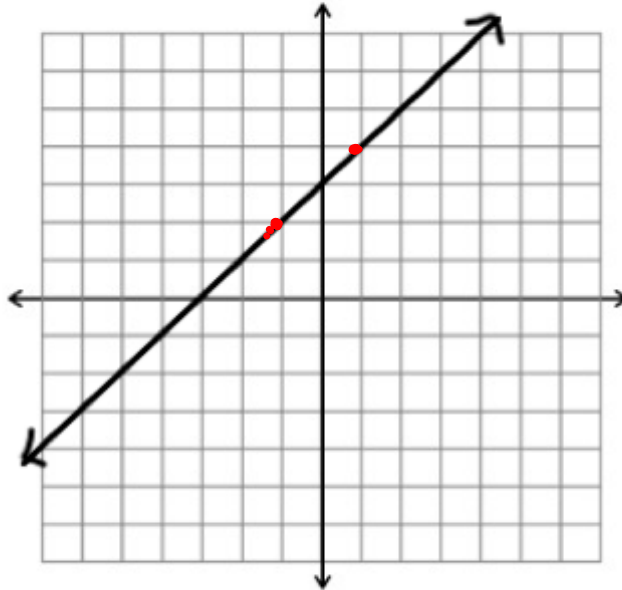
b. $f(-3)$

$$\begin{aligned} & -4(-3) + 7 = 19 \\ & 12 + 7 \end{aligned}$$

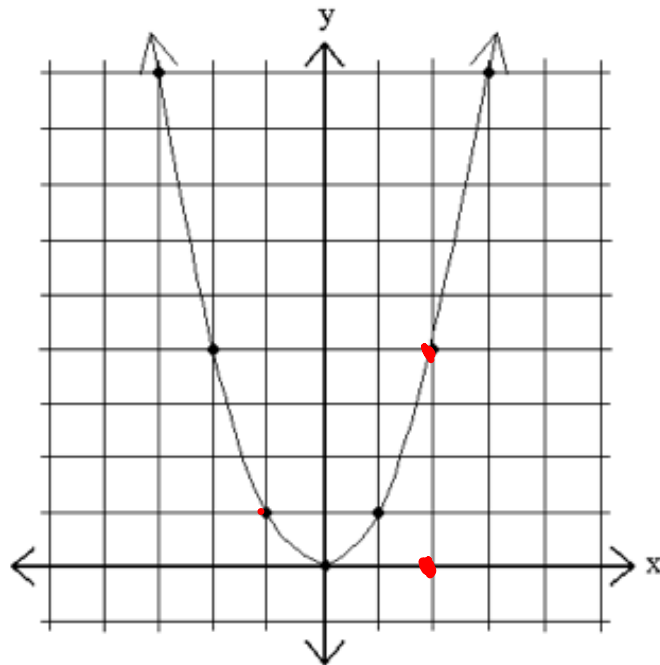
c. $f(0)$

$$-4(0) + 7 = 7$$

Evaluating functions graphically.



a. $f(-1) = 2$ b. $f(1) = 4$



a. $f(-1) = 1$

b. $f(x) = 4 \quad x = -2 \text{ or } 2$

x	f(x)
-2	-7
<u>-1</u>	<u>-4</u>
<u>0</u>	<u>-1</u>
1	2

a. $f(\underline{-1}) =$

b. $f(0) =$

x	y
-2	-11
-1	<u>-2</u>
0	1
1	<u>-2</u>
2	-11

a. $f(x) = -2$

b. $f(2) =$

$$f(x) = 3 \cdot 2^x$$

Find each value:

$$f(7) = 3 \cdot 2^7$$

$$f(0) =$$

$$f(1) =$$

$$5(4) + 3 =$$
$$20 + 3 = 23$$

