

Name: _____ Algebra 9 Unit 3 Lesson 3

Graphs of Functions

DO NOW ~ Friday 1/24

Given the function f defined by the formula $f(x) = 2x + 1$ find the following:

$f(4)$



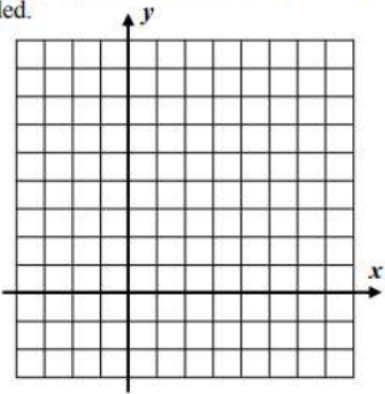
Classwork

Exercise #2: Consider the function given by the rule $g(x) = 2x + 3$.

(a) Fill out the table below for the inputs given.

x	$2x + 3$	(x, y)
-3		
-2		
-1		
0		
1		
2		
3		

(b) Draw a graph of the function on the axes provided.



DO NOW ~ Monday 1/27

What is a linear function?

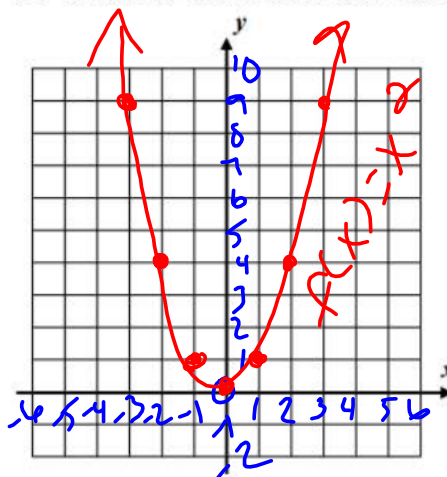
A Line



Classwork

Exercise #3: Consider the simplest **quadratic function** $f(x) = x^2$. Fill out the function table below for the inputs given and graph the function on the axes provided.

x	x^2	(x, y)
-3	$(-3)^2$	$(-3, 9)$
-2	$(-2)^2$	$(-2, 4)$
-1	$(-1)^2$	$(-1, 1)$
0	$(0)^2$	$(0, 0)$
1	$(1)^2$	$(1, 1)$
2	$(2)^2$	$(2, 4)$
3	$(3)^2$	$(3, 9)$



D

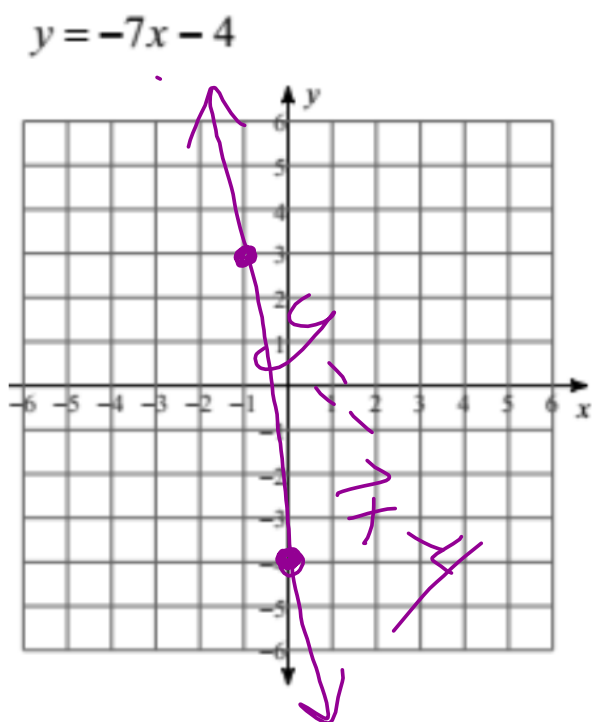
DO NOW ~ Tuesday 1/28 *line*

What does a linear equation look like on a graph? _____



Classwork

TABLE AND LABEL



x	y
-1	3
0	-4

To earn your full participation point for the Do Now be sure to have completed all of the following by the time is up:

- 1) Be in your seat
- 2) Take out your calculator
- 3) Have last night's homework out
- 4) Complete the do now



DO NOW ~ Wednesday 1/29

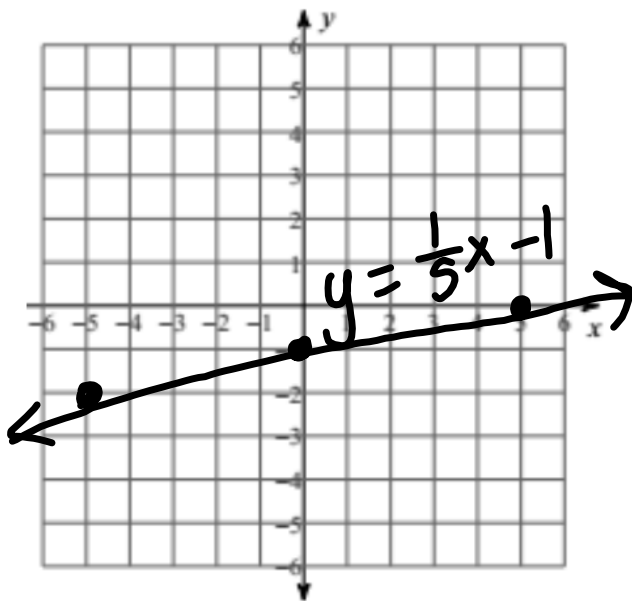
How many points do you need in order to graph a linear equation? _____



Classwork

TABLE AND LABEL

$$y = \frac{1}{5}x - 1$$



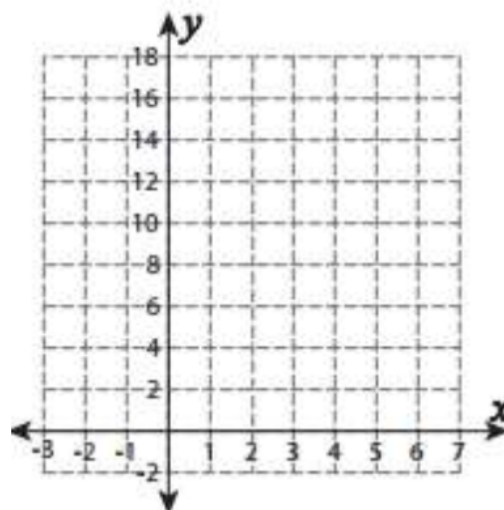
x	y
0	-1
5	0
-5	-2

Mrs. Ferreri's Station ~ Graphing Functions

Complete the function table. Plot the points and graph the line. ****Be sure to show the SUBSTITUTION and LABEL your function.**

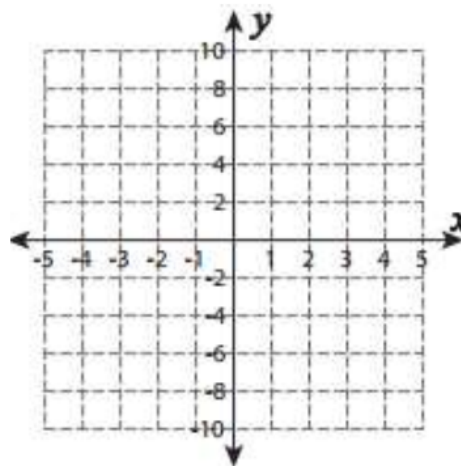
$$f(x) = 5 + x$$

x	-3	-1	3	5	7
$f(x)$					



$$f(x) = 4x - 6$$

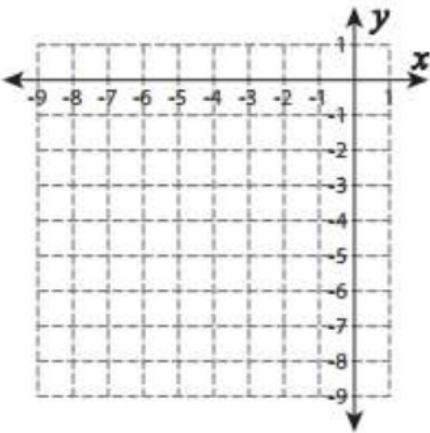
x	0	1	2	3	4
$f(x)$					



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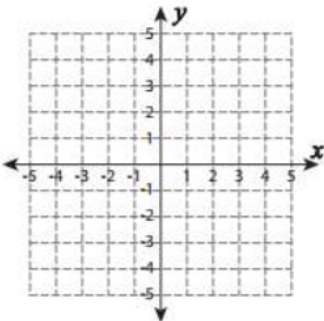
$f(x) = -x - 7$

x	-7	-5	-3	-2	0
$f(x)$					



$f(x) = x^2 + 4x + 1$

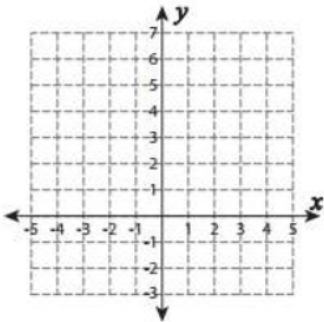
x	-4	-3	-2	-1	0
$f(x)$					



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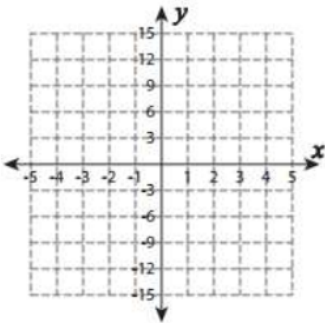
$f(x) = (x - 1)^2 + 1$

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



$f(x) = 3x^2$

x	-2	-1	0	1	2
$f(x)$					



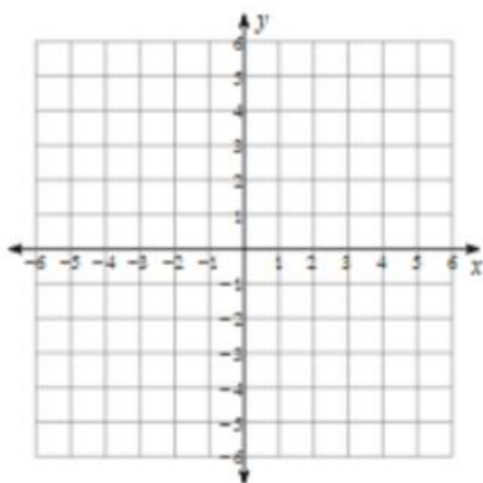
Computer Station ~ *Screencast on Google Classroom*

Go to the **Google Classroom** and click on the “Graphing Functions using a Graphing Calculator” video and following along with me below.

****PAUSE the video when you need to****

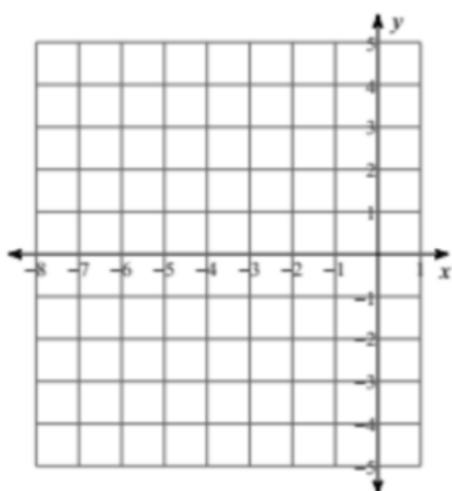
Linear Function

1) $y = 3x - 1$



Quadratic Function

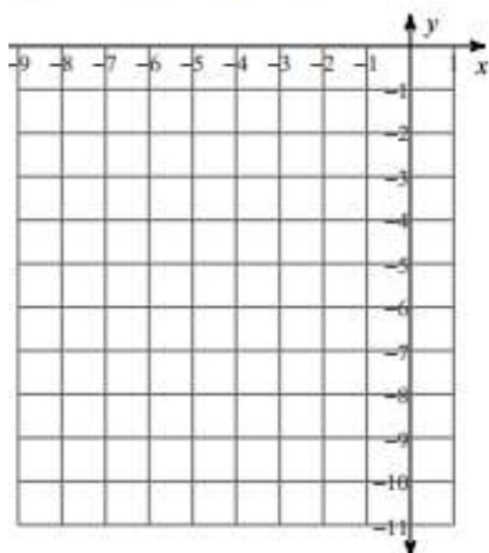
7) $y = -2x^2 - 16x - 28$



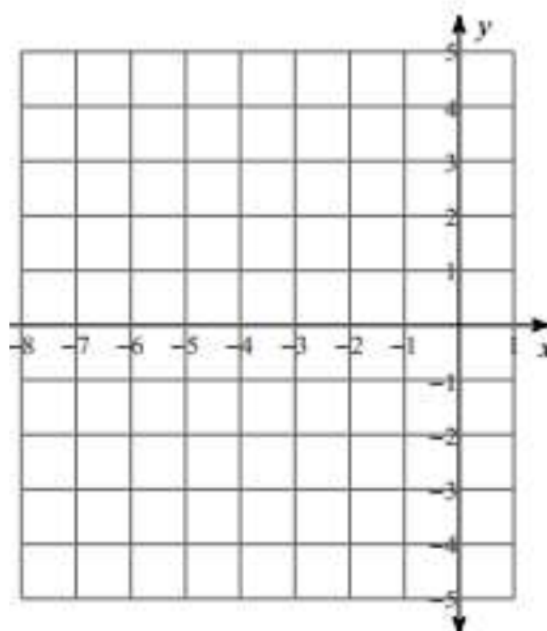
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Graph the following Quadratic Functions independently using the table and label method.

$$y = -2x^2 - 8x - 10$$



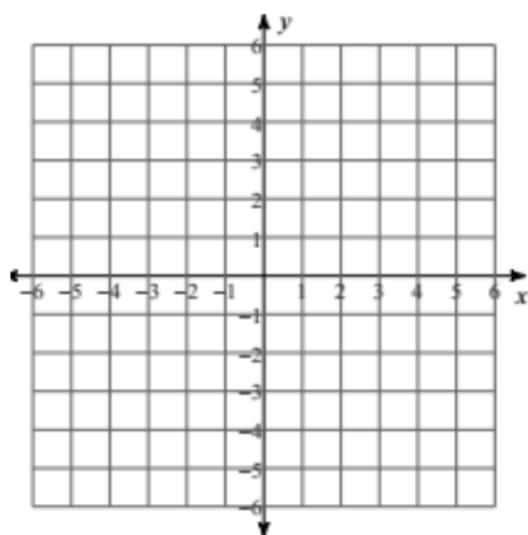
$$y = -2x^2 - 16x - 28$$



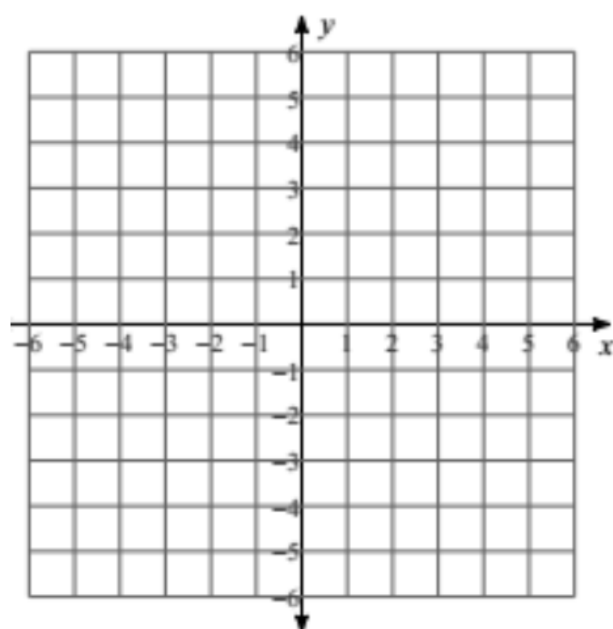
Mrs. Kennedy's Station ~ Graphing Functions

Use your calculator to do the **table** and **label** method to graph the following linear functions.

1) $y = -x - 1$

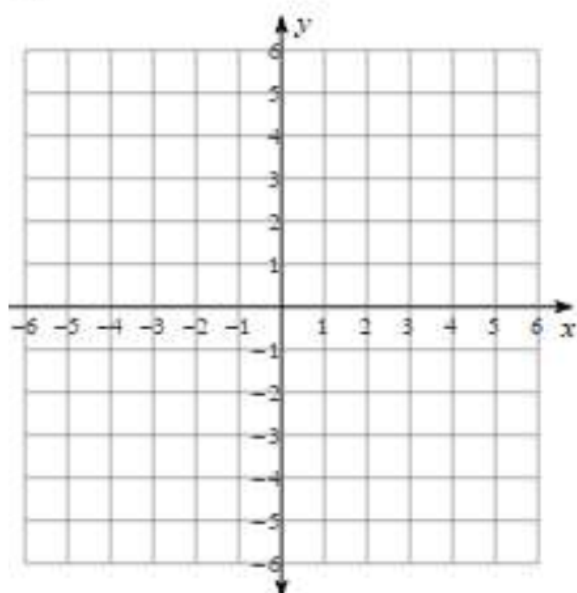


2) $y = -7x + 4$

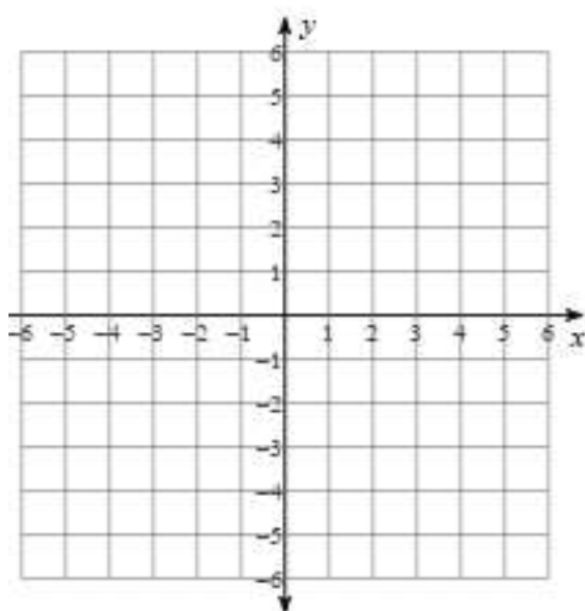


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$$y = 3x - 1$$



$$y = -\frac{4}{5}x + 3$$

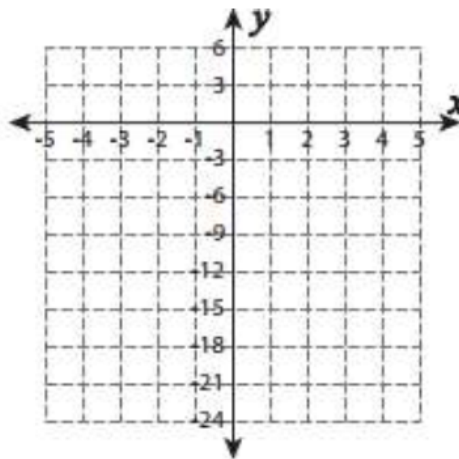


Homework ~ Monday 1/27

Complete the function table. Plot the points and graph the line. **REMEMBER: $f(x)$ is Y!**

$$f(x) = 3x - 6$$

x	-5	-4	-3	-2	-1
$f(x)$					

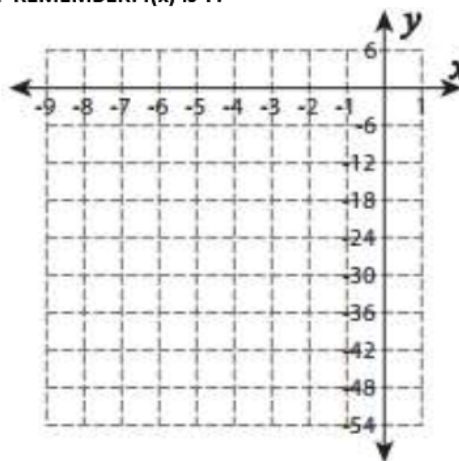


Homework ~ Tuesday 1/28

Complete the function table. Plot the points and graph the line. **REMEMBER: $f(x)$ is Y!**

$$f(x) = 6x$$

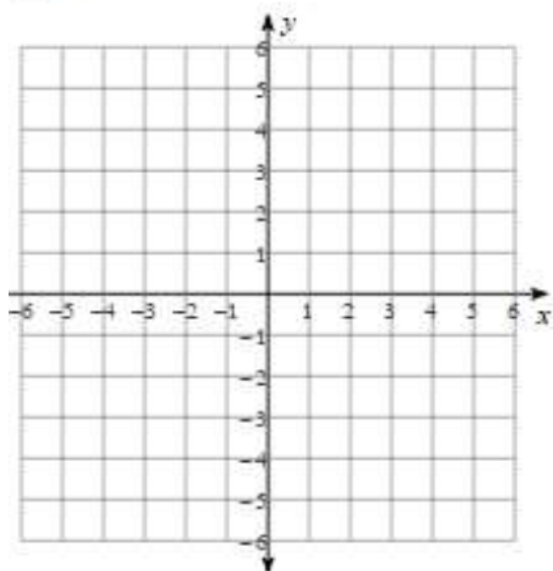
x	-8	-6	-5	0	1
$f(x)$					



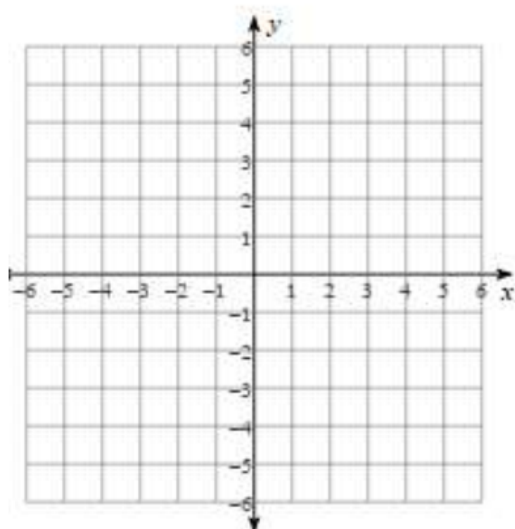
Homework ~ Wednesday 1/29

Use your calculator to do the **table** and **label** method to graph the following linear functions.

$$y = -3x - 1$$



$$y = \frac{1}{4}x + 1$$



Name: _____ Unit 3 Graded Classwork

Identify whether the following are functions or not functions.

1) $(3, -2), (-2, 3), (3, 1), (-2, 0)$

_____ Function

_____ NOT a function

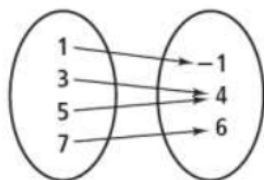
2) $(-2, 3), (3, -2), (1, 3), (0, -2)$

_____ Function

_____ NOT a function

3) WHY is #2 a function or not a function? Explain HOW you know: _____

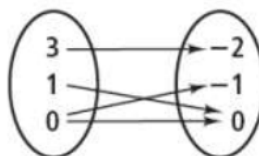
4)



_____ Function

_____ NOT a function

5)



_____ Function

_____ NOT a function

6)

Input x	Output y
-2	-3
-1	-1
0	1
1	3
2	5
3	7
4	9

_____ Function

_____ NOT a function

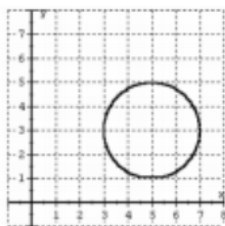
7)

Input x	Output y
4	-2
1	-1
0	0
1	1
4	2
9	3
16	4

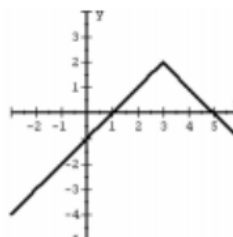
_____ Function

_____ NOT a function

8)

☐ Function☐ NOT a function

9)

☐ Function☐ NOT a function

10) WHY is #8 a function or not a function? Explain HOW you know: _____

Evaluate the following expressions given the functions below:

11) $g(x) = -3x + 1$

$g(-4) =$

12) $h(x) = \frac{x+5}{3}$

$h(10) =$

HINT (Remember $f(x)$ is the Y)

13) $f(x) = 2x - 7$

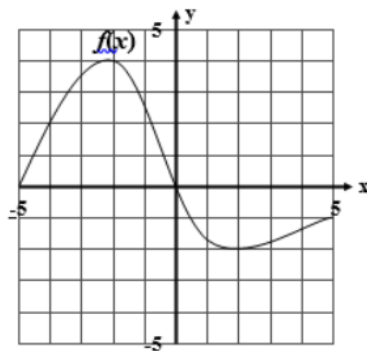
$f(x) = -3$

14) $f(x) = -2(x - 4)$

$f(x) = 14$

BONUS:

Given this graph of the function $f(x)$:



Find:

a. $f(-4) =$

b. $f(0) =$

c. $f(3) =$

d. $f(-5) =$