Warm Up September 21, 2018

Given $f(x) = -x-8$ and $g(x) = x^2+8x+15$ find:

1.) $f(-1) + 10$

$[-(-1)-8]+10$

$-7+10$

3

2.) $g(-9) + 7$

$[(-9)^2+8(-9)+15]+7$

$[81-72+15]$

$24+7$

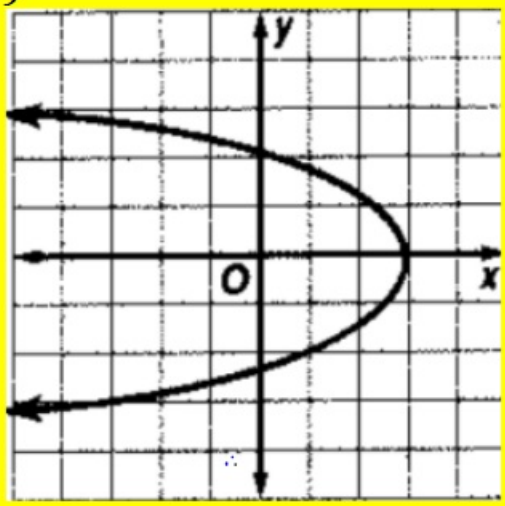
31

3.) $f(4) - g(-2)$

$[-(4)-8]-[(-2)^2+8(-2)+15]$

$-12-3=-15$

4.)



Domain: $x \leq 3$

Range: ARN

Function: no

Writing Linear Equations

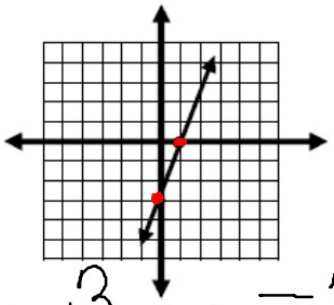
$y = mx + b$

GIVEN A GRAPH

- ✓ ***Step 1:*** Identify the Slope and y-int
- ✓ ***Step 2:*** Write the equation in **slope-intercept form**: $y = mx + b$

Some Examples...

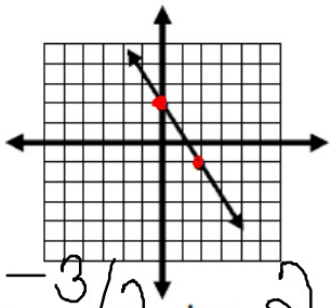
1



m = 3 b = −3

Equation: $y = 3x - 3$

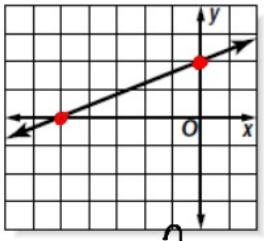
2



m = −3/2 b = 2

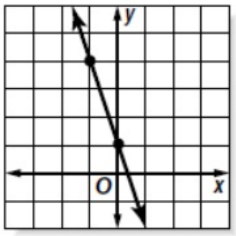
Equation: $y = -3/2x + 2$

3



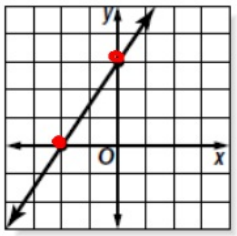
Equation: $y = \frac{2}{5}x + 2$

4



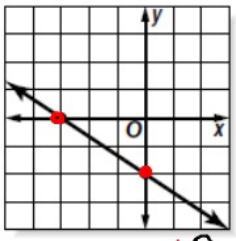
Equation: $y = -3x + 1$

5



Equation: $y = \frac{3}{2}x + 3$

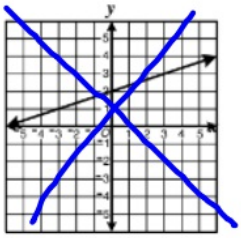
6



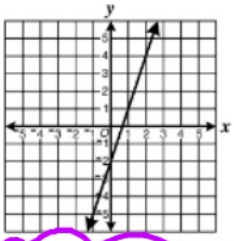
Equation: $y = \frac{-2}{3}x - 2$

13 Which graph represents the line $y = \frac{1}{3}x - 2$?

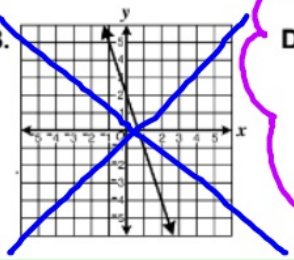
A.



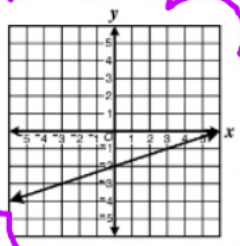
C.



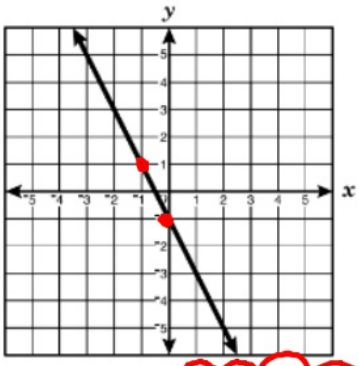
B.



D.



14 Which best represents the equation of the line?



~~A. $y = 2x - 1$~~

C. $y = -2x - 1$

~~B. $y = \frac{1}{2}x - 1$~~

D. $y = \frac{-1}{2}x - 1$

Writing Linear Equations Given a Table

x	y
−2	3
−1	5
0	7
1	9
2	11

+1 +1 +1 +1

+2 +2 +2 +2

m= 2 b= 7

Equation: y=2x+7

x	y
0	3
1	5.5
2	8
3	10.5
4	13

+1 +1 +1 +1

+2.5 +2.5 +2.5 +2.5

m=____ b=

Equation: y=2.5x+3

Just like writing an equation from a graph, you need to *identify the slope and the y-intercept.*

How do you find the y-intercept from a table?

Writing an Equation from a Table WITHOUT x=0

https://www.youtube.com/watch?v=Qo1_xkv2w_M

	x	y	
	−6	− 4	−1
+1	−5	−9	−5
+1	− 4	−14	−5
+1	−3	−19	−5
	−2	−24	−5
	−1	−29	−5
	0	−34	−5

m= −5 b = −34

Equation: y=−5x−34

Practice:

Write the equations using the tables provided.

	x	y	
	−1	1	
+2	0	1.5	+1
+2	1	2	+1
+2	3	3	+1
+2	5	4	+1
+2	7	5	+1

m= 1/2

b = 3/2

Equation:

$y = \frac{1}{2}x + \frac{3}{2}$

	x	y	
	−5	10	
+2	−3	6	−4
+2	−1	2	−4
+1	0	0	−2 −4
+2	1	−2	−4
	3	−6	

m= −2

b = 0

Equation:

$y = -2x$