

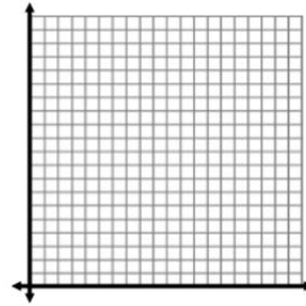
6.1 Write Linear Equations in Slope-Intercept Form

NOTES

Write your questions here!

VERBAL: Mr. Brust talks a METRIC-TON in his videos and the other Algebras try to convince him to cut them back. His first video was 27 minutes long but he says he'll cut back 2 minutes each video.

LABEL	LABEL
(units)	(units)
0	
1	
2	
3	



Write the rule:

Initial Value:

Rate of Change:

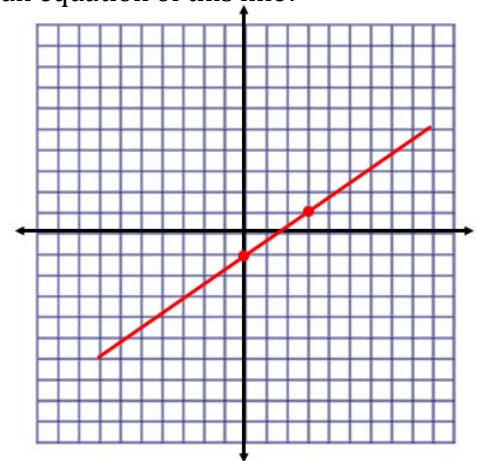
$$y = mx + b$$

Steps to find an equation in slope-intercept form.

Ex 1: What's an equation of this line?

slope = 4
y-intercept = -6

Ex 2: What's an equation of this line?



Ex #3: What's the equation of a line that passes through the following two points?
 $(-3, 1), (0, -8)$

Ex #4: Write an equation for the linear function f with the given values.
 $f(0) = -2, f(4) = -3$

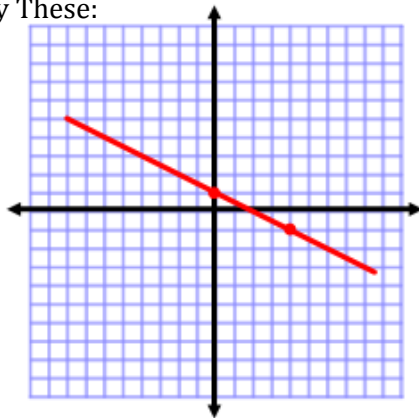
Ex #5: The initial fee to have a website set up using a server is \$48. It costs \$44 per month to maintain the website.

a) Write an equation that gives the total cost of setting up and maintaining a website as a function of the number of months it is maintained.

b) Find the total cost of setting up and maintaining the website for 6 months.

Try These:

1)



2) $(0, 4), (6, 13)$

SUMMARY:

Now,
summarize
your notes
here!

6.1 Write Linear Equations in Slope-Intercept Form

PRACTICE

Write an equation of the line with the given slope and y-intercept.

1) slope: 2
y-intercept: 9

2) slope: -3
y-intercept: 0

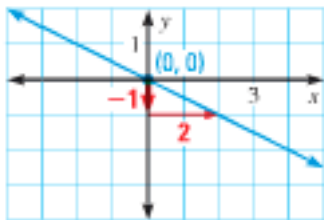
3) slope: $\frac{2}{3}$
y-intercept: -9

4) Which equation represents the line with a slope of -1 and a y-intercept of 2?

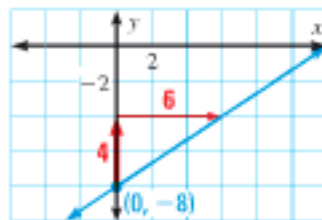
a) $y = -x + 2$ b) $y = 2x - 1$ c) $y = x - 2$ d) $y = 2x + 1$

Write an equation of the line shown.

5)

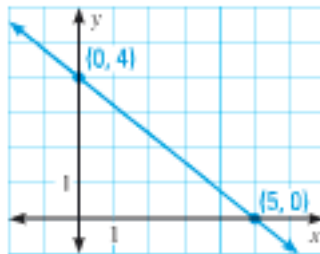


6)



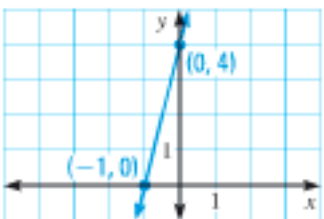
7) Describe and correct the error in writing an equation of the line shown.

$$\text{slope} = \frac{0 - 4}{0 - 5} = \frac{-4}{-5} = \frac{4}{5}$$
~~$$y = \frac{4}{5}x + 4$$~~

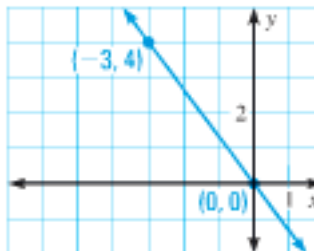


Write an equation of the line shown.

8)



9)



Write an equation of the line that passes through the given points.

10) (2, -7), (0, -5)

11) (0,4), (8, 3.5)

Write an equation of the linear function f with the given values.

12) $f(0)=7, f(3) = 1$

13) $f(0)=-1, f(5) = -5$

SKILLZ REVIEW

Find the slope of the line.

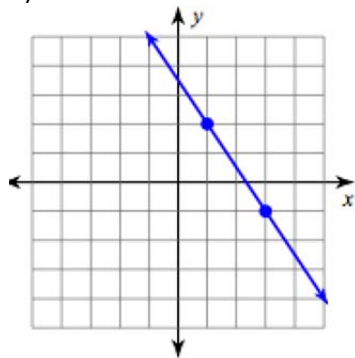
Simplify.

Solve.

1)

2) $4(3x + 8) + 2x$

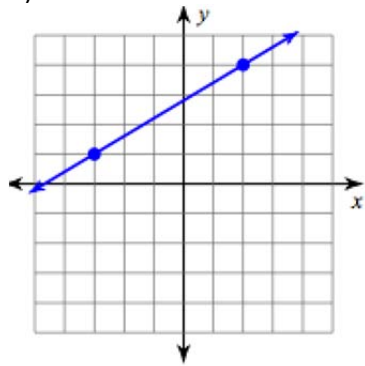
3) $7 = 6 + \frac{x}{9}$



4)

5) $8 - 3(2b - 7)$

6) $\frac{5+n}{2} = -4$

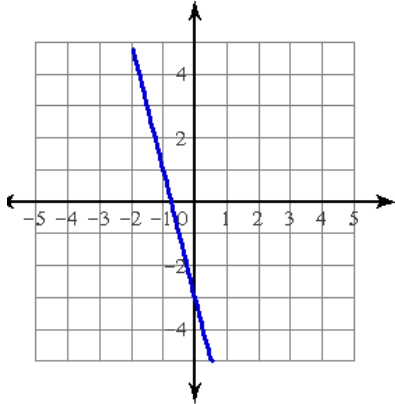


6.1 Write Linear Equations in Slope-Intercept Form

APPLICATION

Directions: Find the equation of the line for each situation.

1)



2) (0, -2) and (1, -4)

AWESOMELY RICH TASK

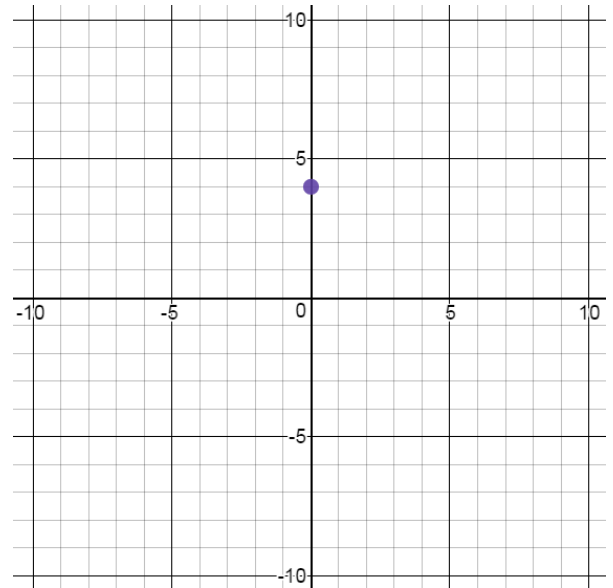
LINE BUILDERS

1) Fill in the table and graph in such a manner that you form a linear relationship.

A)

x	y
-2	
-1	
0	4
1	
2	
3	

What is the equation of the line:
Y =



Make sure to label your lines

B)

x	y
0	4
1	
2	
3	
4	
5	

What is the equation of the line:
Y =

C)

x	y
-5	
-4	
-3	
-2	
-1	
0	4

What is the equation of the line:
Y =

What do all of your equations have in common?

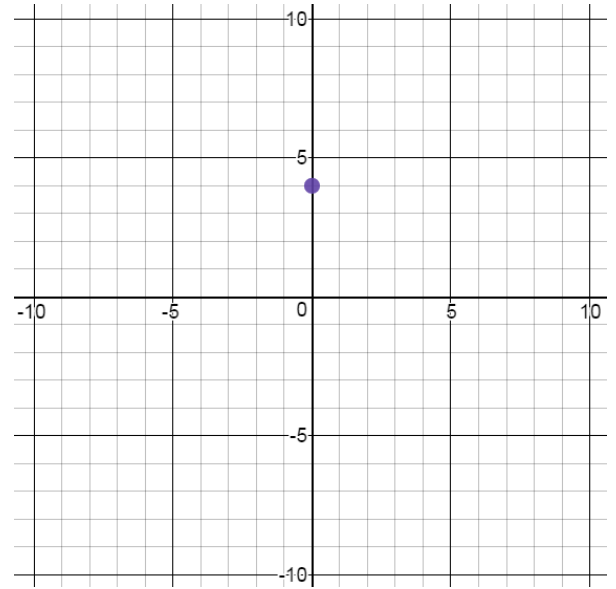
What's different about your equations? How can you compare what's different from the table? From the graph?

2) Fill in the table and graph in such a manner that you form a linear relationship.

A)

x	y
-9	-6
-6	
-3	
0	0
3	
6	

What is the equation of the line:
Y =



Make sure to label your lines

B)

x	y
-6	
-3	
0	7
3	5
6	
9	

What is the equation of the line:
Y =

C)

x	y
-6	
-3	
0	
3	-6
6	
9	-10

What is the equation of the line:
Y =

What do all of your equations have in common? How do you know that from the equation? From the graph?

What do you think will be true about all lines that have this common trait?