

Warm Up

SOLVE for x: $-2(1-4x) = 3x + 8$



~~A) 6/11~~

B) 2 ✓

C) -10/7

D) -2

$$-2(1-4(\quad)) = 3(\quad) + 8$$

$$-2(1-4(6/11))$$

$$2.363636364$$

$$3(6/11)+8$$

$$9.636363636$$

$$-2(1-4(2))$$

$$14$$

$$3(2)+8$$

$$14$$

* **Equation of a line:** $y = mx + b$

- m is the slope
- b is the y-intercept

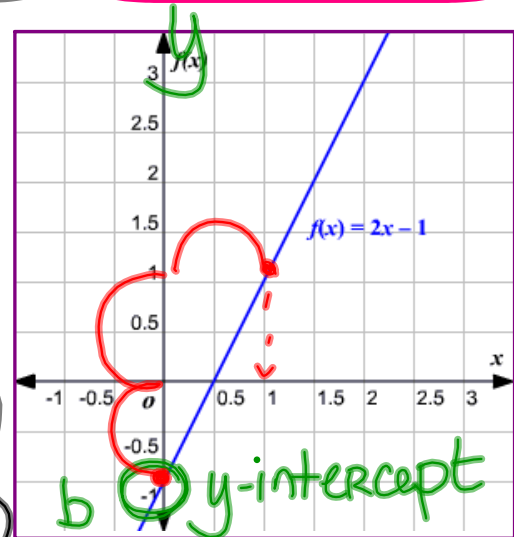
Graphing Lines

This is an example ☺

How you would write the equation of the line if you knew the slope was 4 and the y-intercept was 7?

$$y = mX + b$$

$$y = 4X + 7$$



$$y = mx + b$$

$$y = \frac{2}{1}X + -1$$

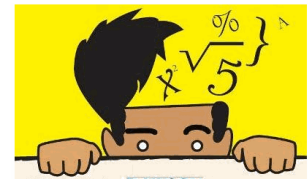
WE TRY:

With a partner, try the following examples:

Write the equation of the linear function with the given information.

1. Slope = $\frac{1}{2}$ and the y- intercept is -1

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



2. Slope = $\frac{2}{3}$ and the y- intercept is -1

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

3. b = -2 and m = $\frac{1}{2}$

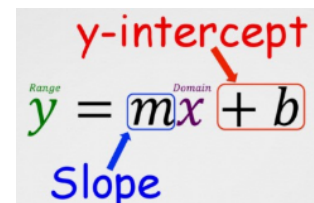
$$y = \frac{1}{2}x - 2$$

4. m = -1

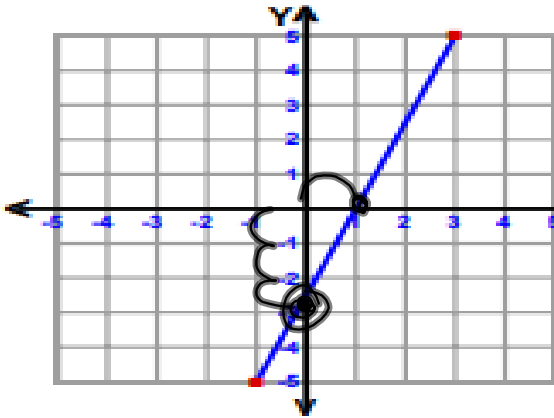
$$y = mx + b$$

$$y = -1x$$

$$y = -x$$



Can you look at this graph and find the slope or y-intercept?



$$y = mx + b$$

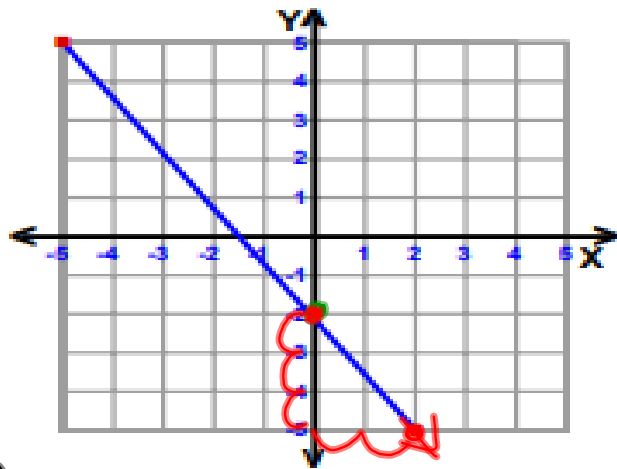
↓ m = Slope (how you move on a graph)
 ↗ Begin, y-intercept

$$\text{slope} = \frac{\text{rise}}{\text{run}}$$

b Find the y-intercept: -3

m Find the slope: $\frac{3}{1}$

Write an equation: $y = 3x - 3$

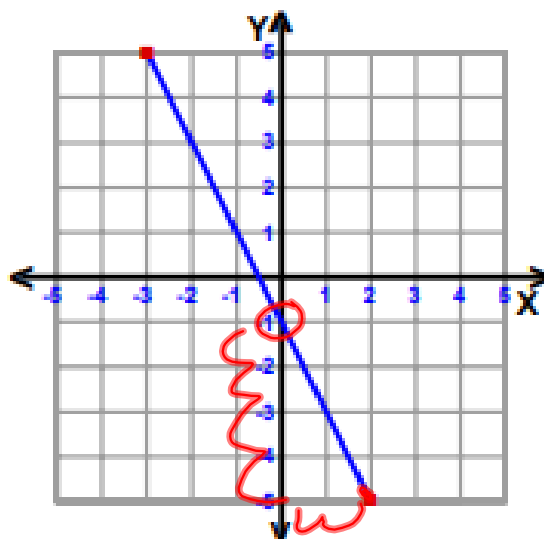
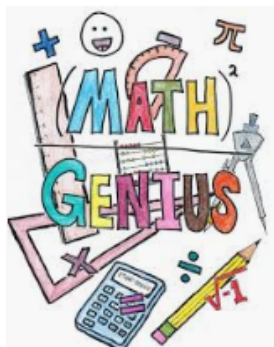


b Find the y-intercept: -2

Find the slope: $-\frac{3}{2}$

Write an equation: _____

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



b Find the y-intercept: -1

m Find the slope: $-\frac{4}{2}$

Write an equation:

$$y = \left(-\frac{4}{2}\right)x - 1$$

$$y = -2x - 1$$

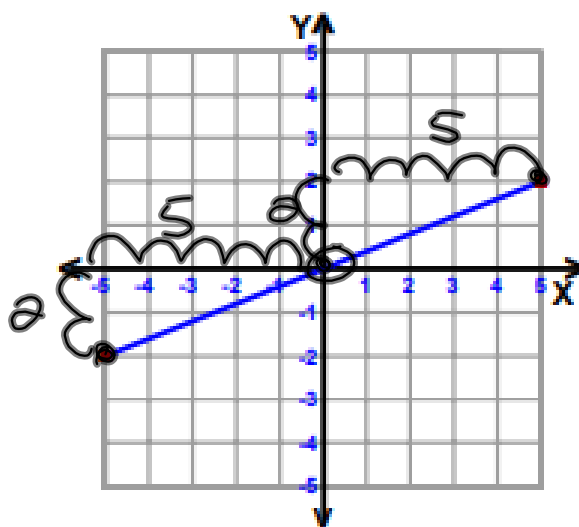
$$-\frac{4}{2}$$

$$-\frac{4}{2}$$

14

-2

-2



EQUATION

b Find the y-intercept: $\frac{0}{}$

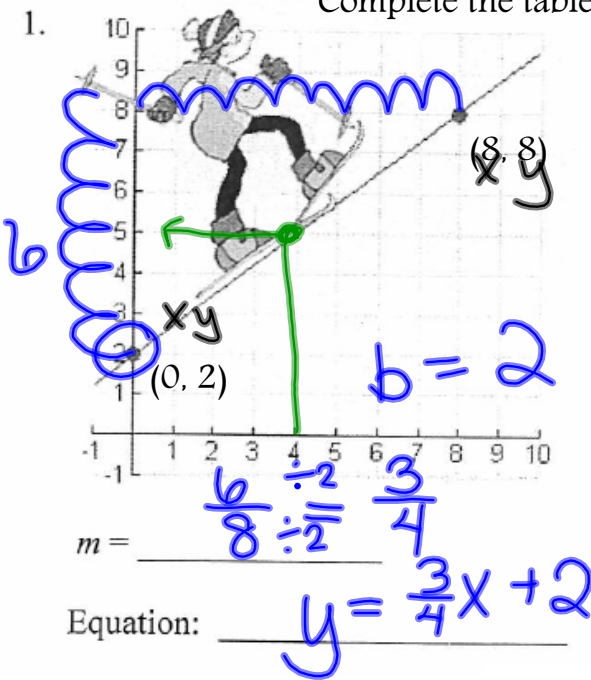
Find the slope: $\frac{2}{5}$

Write an equation: $y = \frac{2}{5}x$

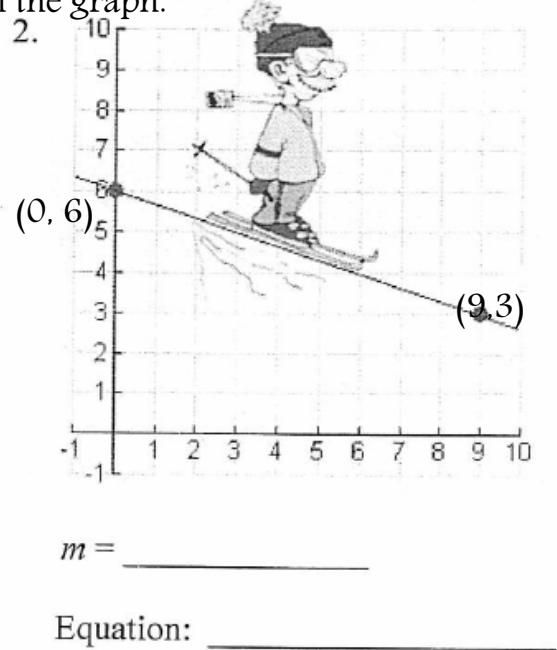
$$y = mx + b$$

Directions: Find the slope of each line. Write the equation of the line.

Complete the table from the graph.

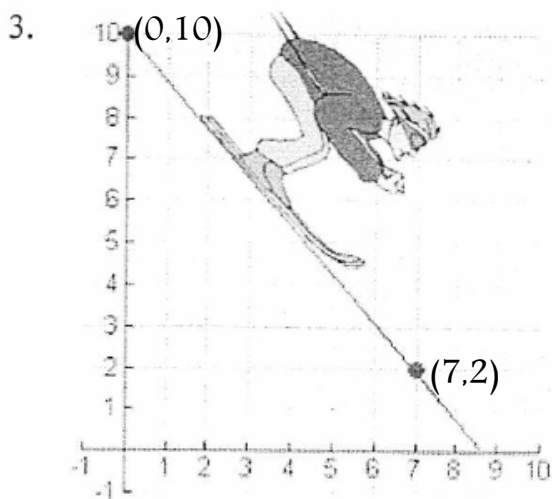


x	0	4	8
y	2	5	8



x	0	3			
y			4	3	

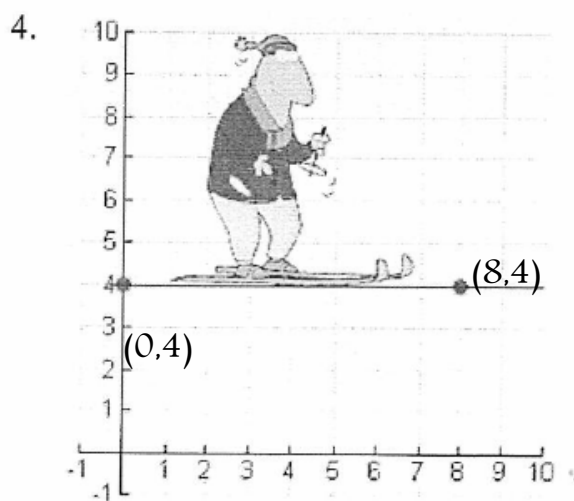
$$y = mx + b$$



$m =$ _____

Equation: _____

x	0				
y					



$m =$ _____

Equation: _____

MathE

x	0	1	5	8	9
y					

Tear off and complete the exit ticket at the end
of the packet!!!



Name: _____

Score: ____/6



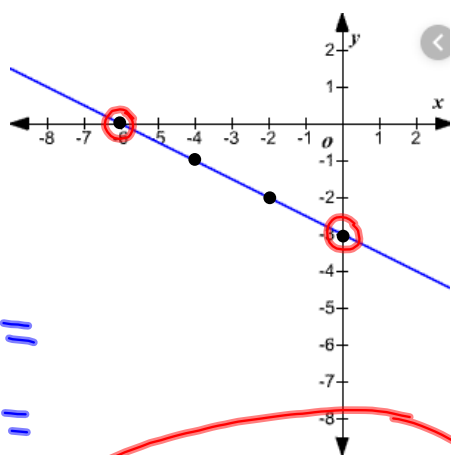
Writing Equations

EXIT TICKET

*tear this page off and
turn it in before you
leave class today*

Write the equation of each line shown below.

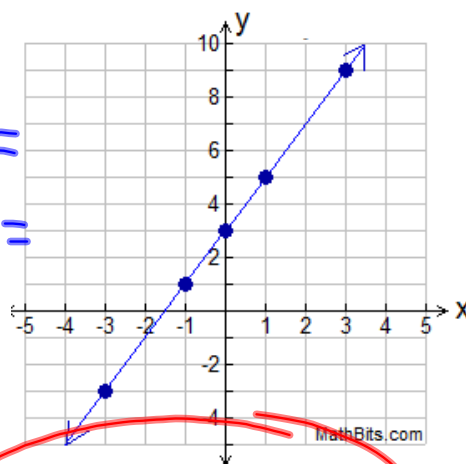
a)



$m =$
 $b =$

$y = _x + _$

b)



$m =$
 $b =$

$y = _x + _$