Warmup $9/(19 \times 1) + 1 + 0 - 0 + 1 - 1$

Created by Raeganne Travis

1) Write an equation.

x	y
0	7
1	11
2	15
3	19
4	23

y = 4x + 7

2) What is the slope and what is the y-intercept for this equation?

y = 7x + 94

What does the slope mean?
What does the y intercept mean?

Retake tomorrow?

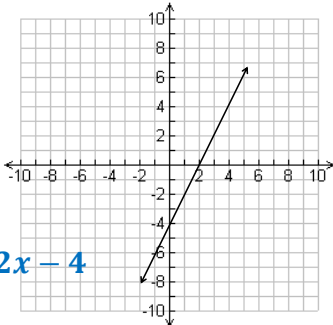- **Must tell me TODAY. (And meet with me today)**

Check Homework

Slope-Intercept Form

$$y = mx + b$$

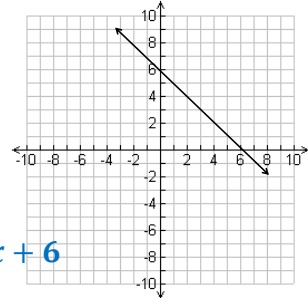- **"m" is the slope**
  - how much the graph increases or decreases for each "x"
  - $\frac{change\ in\ y}{change\ in\ x}$
- **"b" is the y-intercept**
  - **The value of y when x is zero (the "initial value")**
  - Always on the y-axis

- (I'm not sure why they picked those letters. If you find out why you can share it with the class)
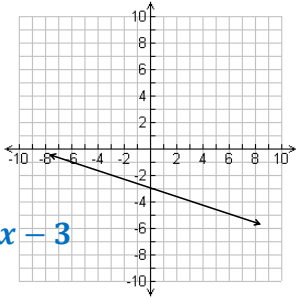

Write the equation:

$$y = 2x - 4$$

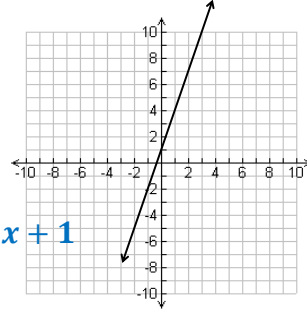
Write the equation:

$$y = -x + 6$$

Write the equation:

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

Write the equation:
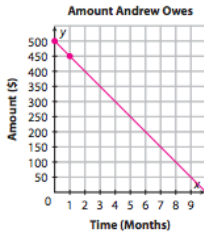

$$y = 3x + 1$$

Andrew wants to buy a smart phone that costs $500. His parents will pay for the phone then Andrew will pay them $50 each month until the entire amount is repaid.

$$f(x) = 500 - 50x$$

A) Write a linear function to describe this situation.
B) What is a reasonable domain and range?
C) What would the graph look like?

Amount Andrew Owes

*Sometimes you will see linear situations graphed as continuous graphs even though a fractional number of months does not make sense here

Graph this situation: An investor invests $500 in a certain stock. After the first six months, the value of the stock has increased at a rate of $20 per month.
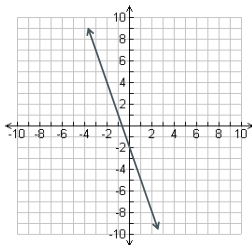
Value of Investment
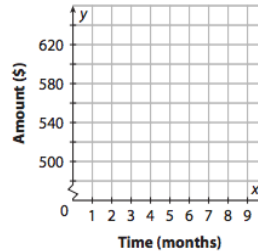
What is the linear equation for this situation?
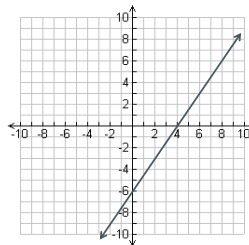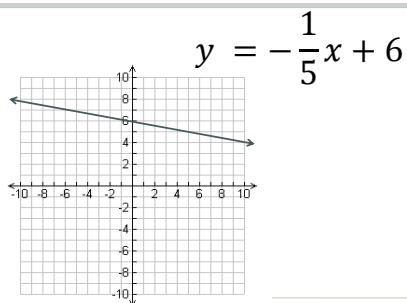
$$f(x) = 500 + 20x$$

- Graph:

$$y = -3x - 2$$

- Graph:

$$y = \frac{3}{2}x - 6$$

- Graph:

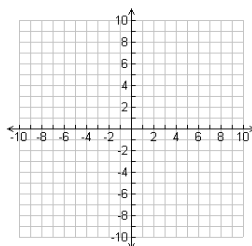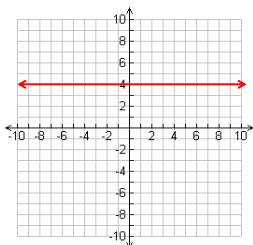$$y = -\frac{1}{5}x + 6$$

Checking our answer with a table!!!

- Graph: $y = \frac{1}{3}x + 4$

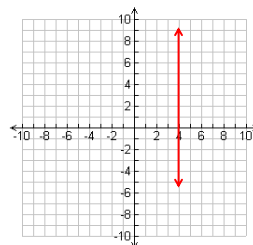| x	y

What would the graph of
y = 4 look like? Convince me.

What would the graph of
x = 4 look like? Convince me.

Write an equation of a line in slope-intercept form with a slope of ½ that passes through (2, -4)

$$y = \frac{1}{2}x - 5$$

Write an equation of a line in slope-intercept form that passes through the point (3, -3) and has slope $-\frac{1}{3}$

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

Write an equation of a line in slope-intercept form that passes through the points (1, 5) and (2, 3)

$$y = -2x + 7$$

Write an equation of a line in slope-intercept form that passes through the points (9, 1) and (7, 3)

$$y = -x + 10$$

Write an equation of a line in slope-intercept form that passes through the points (6, -3) and (-4, 2)

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

Write an equation of a line in slope-intercept form that passes through the points (9, 5) and (11, 5)

y= 5

Write an equation of a line in slope-intercept form that passes through the points (5, 9) and (5, 11)

$$x = 5$$

HOMEWORK

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