

Warm up (do on back of your HW)

1. Plot and label the ordered pairs in the coordinate plane.

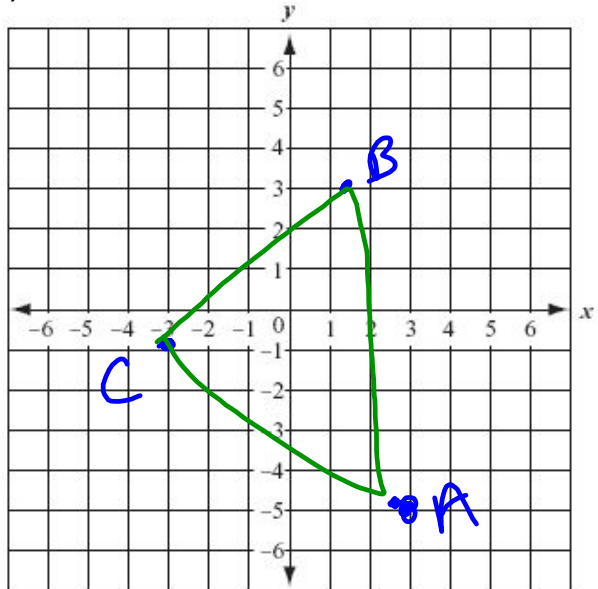
$$A(3, -5), B(1.5, 3), C(-3, -1)$$

2. Determine what quadrant each ordered pair is in.

a) $(5, -2)$ IV

b) $(-2, 7)$ II

c) $(-80, -107)$ III



Homework Questions?

$$\frac{345}{500} = 0.69$$

$$\frac{69}{100}$$

$$69\%$$

On the top of your paper (by your name) rate yourself for this section:

4 - I can summarize the concepts and explain it to others

3 - I can apply the concept to answer questions correctly

2 - I can apply the concepts but with some mistakes

1 - I need help and know how to apply the concept

0 - I can't apply the concept, even with help

Rating of 0-2 is a warning signal to me that you need help

4.2 Graphing Linear Equations

Goals:

- Graph a linear equation using a table.
- Graph horizontal and vertical lines.

EQ: How do you decide if a point is on a line algebraically?

NAME: _____
DATE: Mo/Date/Year _____

Algebra 1.5

② LAST UNIT/Experience Solving Linear Equations	① CURRENT UNIT Graphing Linear Equations & Functions	③ NEXT UNIT/Experience Writing Linear Equations
⑧ Student Activities or Assignments 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8	⑤ UNIT MAP 	
⑦ UNIT SELF-TEST QUESTIONS 1. How do you use a table to graph a line? 2. How do I find the intercepts in order to graph a line? 3. How can I calculate the slope with coordinates, or a graph, or a real world situation? 4. How do I write and solve a direct variation model? 5. How can I graph a line using the slope and y-intercept? 6. How can I determine a function and then evaluate it?	⑥ UNIT RELATIONSHIPS Graph Determine Identify Calculate	

Vocabulary

Solution of an equation:

the ordered pair that makes the equation true

(x, y)

Graph of an equation:

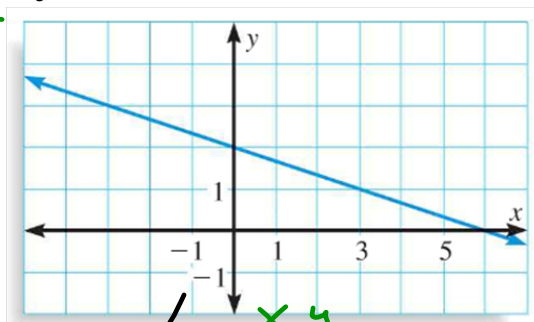
set of all points that are solutions

Linear (straight line)

Verifying Solutions of an Equation

Decide whether the point lies on the graph of the line.
Justify your answer algebraically.

$$x + 3y = 6$$



$$(1, 2)$$

$$\begin{array}{l} x \quad y \\ 1 + 3(2) = 6 \\ 1 + 6 = 6 \\ 7 \neq 6 \end{array}$$

No, not on line

$$(-3, 3)$$

$$\begin{array}{l} -3 + 3(3) = 6 \\ -3 + 9 = 6 \\ 6 = 6 \end{array}$$

Yes, pt is on line

$$(0, 2)$$

$$\begin{array}{l} 0 + 3(2) = 6 \\ 6 = 6 \end{array}$$

Yes pt is on line

Graphing a Linear Equation

1. Rewrite the equation in Function, if necessary.
2. Choose a few values of X and make a table.
3. Plot the points from the table of values. A line through these points is the solution of the equation.

* choose +, 0, -
numbers

x	y

Use a table of values to graph the equation $x + 4y = 4$.

1. Solve for y.

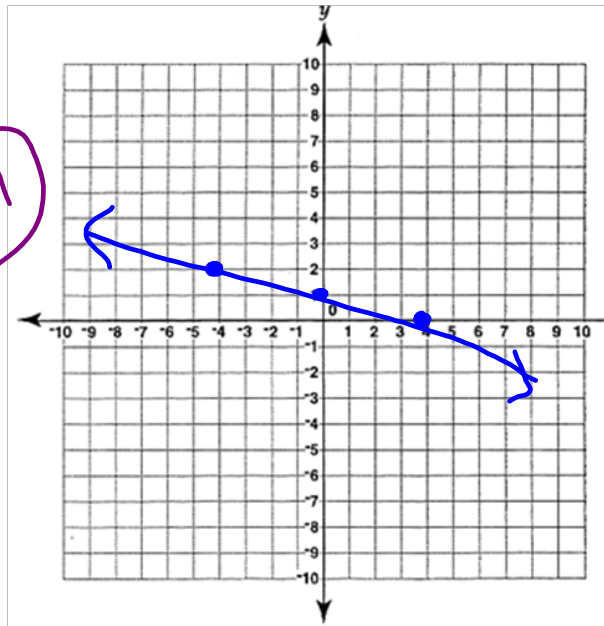
$$x + 4y = 4$$

$$-x \quad -x$$

$$\frac{4y}{4} = \frac{4-x}{4}$$

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

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



2. Make a table.

$$-\frac{1}{4}(-4) + 1 = 1 + 1 = 2$$

$$-\frac{1}{4}(0) + 1 = 1$$

$$-\frac{1}{4}(4) + 1 = 0$$

X	Y
-4	2
0	1
4	0

3. Plot the points and draw a line through them.

Try It

Use a table of values to graph the equation $x - 2y = 1$.

① $x - 2y = 1$

$$-x \quad -x$$

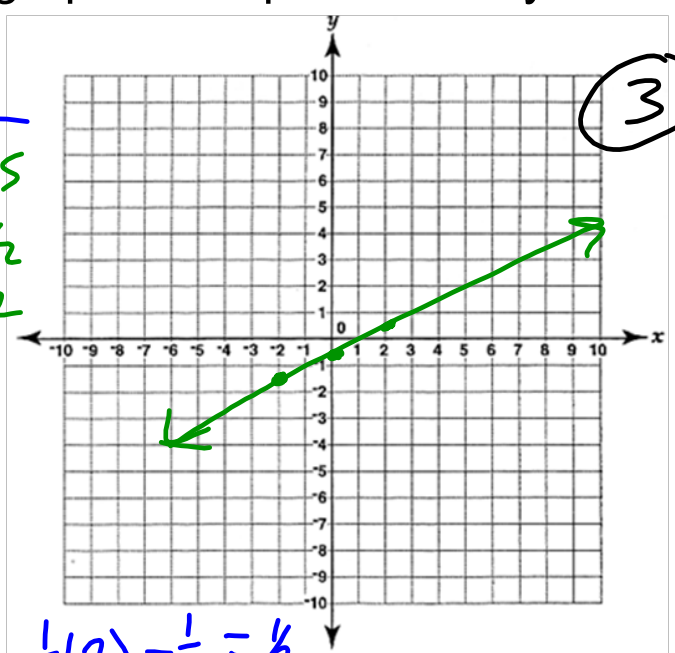
$$\frac{-2y}{-2} = \frac{1-x}{-2}$$

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

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

②

x	y
-2	-1.5
0	-1/2
2	1/2



$$\frac{1}{2}(-2) - \frac{1}{2} = -1.5$$

$$\frac{1}{2}(0) - \frac{1}{2} = -\frac{1}{2}$$

$$\frac{1}{2}(2) - \frac{1}{2} = \frac{1}{2}$$

Graphing Linear Equations wkst

4.2 Homework Day 1

Graphing Linear Equations wkst #1-6

& Graphing by making tables wkst (skip #3,5,10,11)

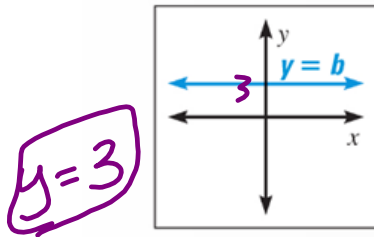
Grab the Warm Ups wkst

*Take out your homework from yesterday

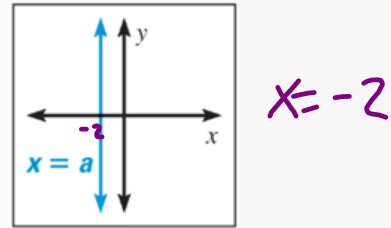
Homework Questions?

Equations of Horizontal and Vertical Lines

EQUATIONS OF HORIZONTAL AND VERTICAL LINES



In the coordinate plane, the graph of $y = b$ is a horizontal line.



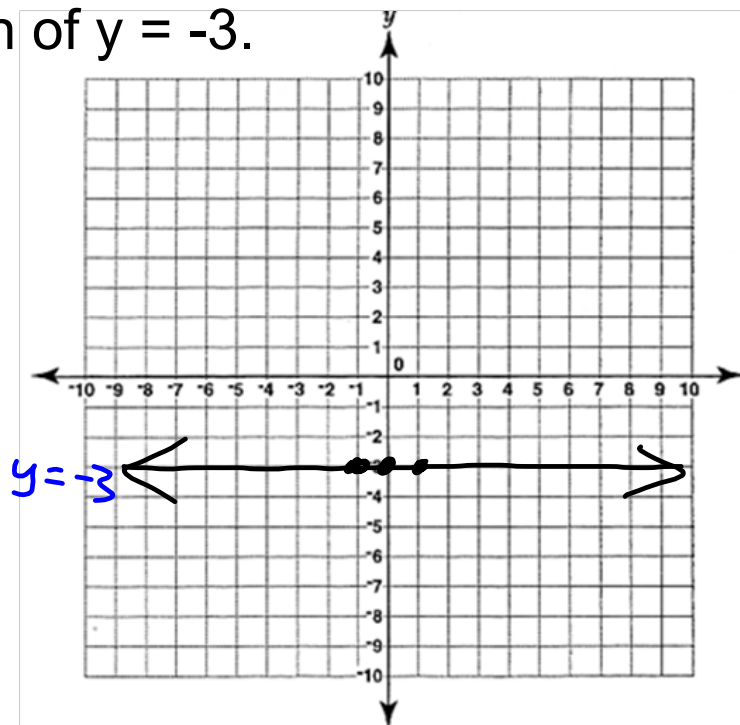
In the coordinate plane, the graph of $x = a$ is a vertical line.

Example

Graph the equation of $y = -3$.

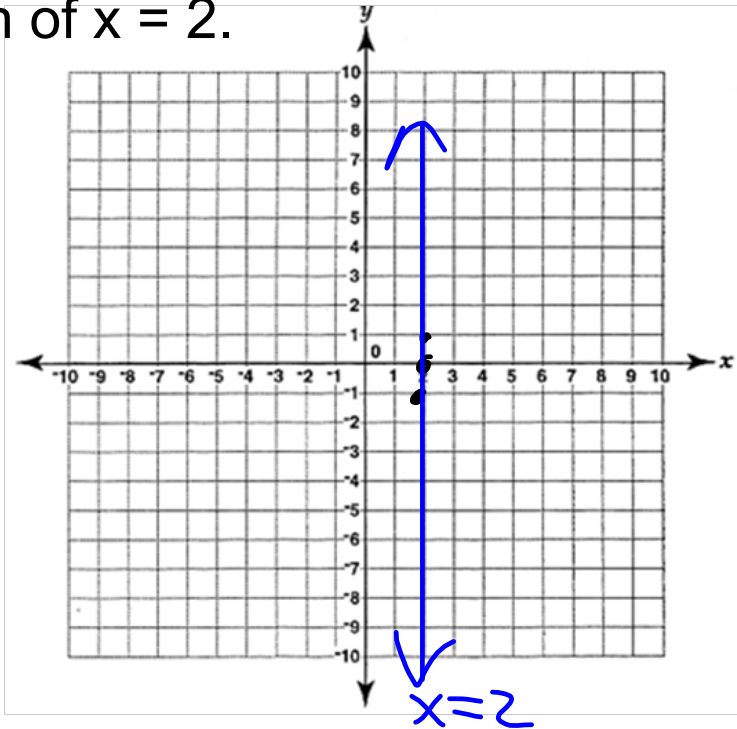
x	y
-1	-3
0	-3
1	-3

$$y = 0x - 3$$



Try ItGraph the equation of $x = 2$.

x	y
2	-1
2	0
2	1

**Summary**

EQ: How do you decide if a point is on a line algebraically?

(x, y)

Plug in the pt to the eqn.

If True \rightarrow pt is on the line

False \rightarrow pt is NOT on the line

4.2 Day 2 Homework

Finish wkst from yesterday
+ 4.2 Practice A #1-33