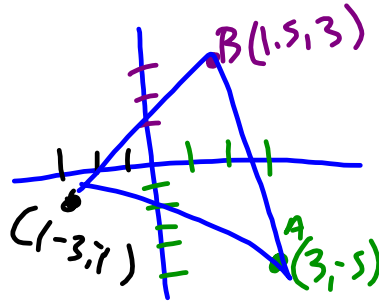


## Warm Up WEEK 9

1. Sketch a coordinate plane, then plot and label the ordered pairs.

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



2. Determine what quadrant each ordered pair is in.

a) (5, -2)  $\frac{2}{3} | \frac{1}{4}$

V

b) (-2, 7)

II

c) (-80, -107)

III

## Homework Questions?

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 of values.

**EQ:** What does function form mean?

NAME: \_\_\_\_\_  
DATE: \_\_\_\_\_ Mo/Date/Year

Algebra 1.5

② LAST UNIT/Experience <b>Solving Linear Equations</b>	① CURRENT UNIT <b>Graphing Linear Equations &amp; Functions</b>	③ NEXT UNIT/Experience <b>Writing Linear Equations</b>
⑧ Student Activities or Assignments  4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8	⑤ UNIT MAP  	⑥ UNIT RELATIONSHIPS  Graph Determine Identify Calculate
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?		

## Vocabulary

**Linear equation:** makes a straight line

**Solution of an equation:** what makes it true

**Function form:**  $y =$  (solve for y)

**Graph of an equation:**  
set of all points that are solutions

**Example 1: Check Solutions of Linear Equations**

Determine whether the ordered pair is a solution of

$$2x + 3y = -6$$

a.  $(3, -4)$

 $x$   $y$ 

$$2(3) + 3(-4) = -6$$

$$6 - 12 = -6$$

$$-6 = -6 \checkmark$$

Yes

b.  $(-4, 1)$

 $x$   $y$ 

$$2(-4) + 3(1) = -6$$

$$-8 + 3 = -6$$

$$-5 \neq -6$$

No

**Try It**Determine whether the ordered pair is a solution of  $-2x + y = 3$ .

1.  $(0, 3)$

$$-2(0) + 3 = 3$$

$$3 = 3 \checkmark$$

Yes

2.  $(1, 1)$

$$-2(1) + 1 = 3$$

$$-2 + 1 = -1$$

$$-1 \neq 3$$

No

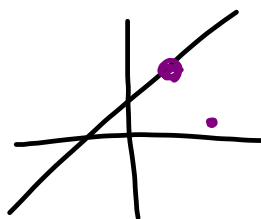
3.  $(1, 5)$

$$-2(1) + 5 = 3$$

$$-2 + 5 = 3$$

$$3 = 3 \checkmark$$

Yes



## Example 2: Find Solutions of Linear Equations

Find three ordered pairs that are solutions of  $-5x + y = -2$

$(x, y)$

$$\begin{array}{r} -5x + y = -2 \\ +5x \quad \quad +5x \\ \hline y = -2 + 5x \end{array}$$

x	y
-1	-7
0	-2
1	3

$(-1, -7)$   
 $(0, -2)$   
 $(1, 3)$

$-2 + 5(-1) = -2 - 5 = -7$   
 $-2 + 5(0) = -2$   
 $-2 + 5(1) = 3$

### SUMMARY

#### Graphing a Linear Equation $y =$

- STEP 1** Rewrite the equation in function form, if necessary.
- STEP 2** Choose a few values of  $x$  and make a table of values.  $-1, 0, 1$
- STEP 3** Plot the points from the table of values. A line through these points is the graph of the equation.

### Example 3: Graph a Linear Equation

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

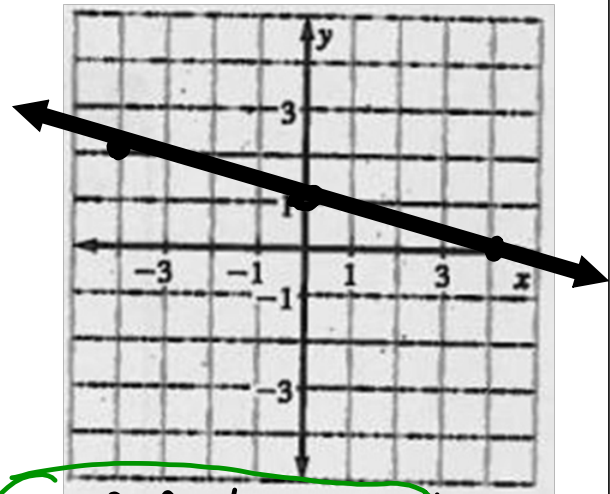
$$\begin{array}{r}
 x + 4y = 4 \\
 -x \qquad -x \\
 \hline
 4y = 4 - x \\
 \frac{4y}{4} = \frac{4-x}{4}
 \end{array}$$

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

x	y
-4	2
0	1
4	0

$$\begin{array}{l}
 1 - \frac{1}{4}(-4) = 1 + 1 \\
 1 - \frac{1}{4}(0) \\
 1 - \frac{1}{4}(4) = 1 - 1
 \end{array}$$

\*If fraction, choose Bottom # for x-values



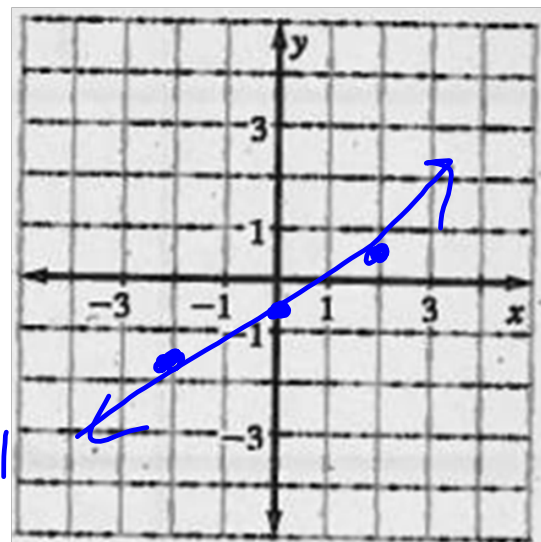
### Try It Complete the following exercise.

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

$$\begin{array}{r}
 x - 2y = 1 \\
 -x \qquad -x \\
 \hline
 -2y = 1 - x \\
 \frac{-2y}{-2} = \frac{1-x}{-2} \\
 y = -\frac{1}{2} + \frac{1}{2}x
 \end{array}$$

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

$$\begin{array}{l}
 -\frac{1}{2} + \frac{1}{2}(-2) = -\frac{1}{2} - 1 \\
 -\frac{1}{2} + \frac{1}{2}(0) \\
 -\frac{1}{2} + \frac{1}{2}(2) = -\frac{1}{2} + 1
 \end{array}$$



**Ch.3 Test was out of  
65 pts**

42 ↓ Needs to  
Retake

## Summary

**EQ:** What does **function form** mean?

# 4.2 Homework

4.2 Graphing Linear Equations wkst #1-6