(Grab Warm Ups & Ch.4 NOTES)   Week 8

1. Decide whether the given ordered pair is a solution of the equation.

a) $-5x - 8y = 7$ $(-3, 1)$

$-5(-3) - 8(1) = 7$ $x \ y$

$15 - 8 \overset{?}{=} 7$

$7 \overset{?}{=} 7$ (yes)

b) $y = -4$ $(-4, 8)$

$8 = -4$ $x \ y$

(No)

2. Rewrite the equation in function form and find three different ordered pairs that are solutions of the equation.   (Hint: make a table of values!) (x, y)

a) $x + 4y = 48$
$-x \qquad -x$

$\dfrac{4y}{4} = \dfrac{-x}{4} + \dfrac{48}{4}$

$y = -\dfrac{1}{4}x + 12$

x	y
-4	13
0	12
4	11

$(-4, 13)$
$(0, 12)$
$(4, 11)$

b) $-2x - 2y = 4$
$+2x \qquad +2x$

$\dfrac{-2y}{-2} = \dfrac{2x + 4}{-2} = -2$

$y = -x - 2$

x	y
-1	-1
0	-2
1	-3

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

$-(-1) - 2 = 1 - 2 = -1$
$-0 - 2 = -2$
$-1 - 2 = -3$

Homework Questions?

1

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

Ch.3 TEST   Out of 65 points

*If you got **42 or lower**, you NEED to RETAKE*

A - 58.5

B - 52

C - 45.5

*RETAKES are Due FRIDAY

POL: Circle the **BOLD #** you got wrong on the test (problems underneath are your review)

*I NEED ALL TESTS BACK

4.3 Quick Graphs Using Intercepts

Goals:

- Find the intercepts of the graph of a linear equation.
- Use the intercepts to make a quick graph of a linear equation.

EQ: How do you make a quick graph using intercepts?

**The Unit Organizer**

NAME _____
DATE _____ Mo/Date/Year

Algebra 1.5

② LAST UNIT/Experience	① CURRENT UNIT Graphing Linear Equations & Functions	③ NEXT UNIT/Experience
Solving Linear Equations		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

is about

Graphing Linear Equations & Functions

including → Identifying functions & using function notation

by → Plotting coordinates

by → Making an x/y table

by → Finding the intercepts

including → Finding the slope

by → Using slope intercept form

including → direct variation models

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

x-intercept:

Where graph crosses the x-axis
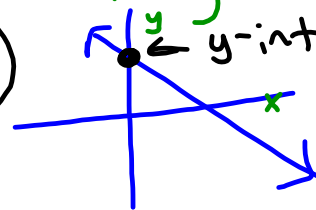
$(x, 0)$ x-int.
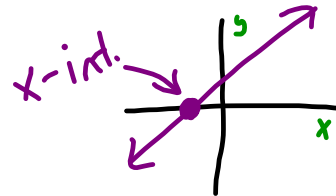
y-intercept:

Where graph crosses the y-axis

$(0, y)$ y-int

Example 1: Finding Intercepts

Find the x-intercept and the y-intercept of the graph of the equation **-3x + 4y = 12**.

1. To find the x-intercept let y = 0 .

$$-3x + 4(0) = 12$$
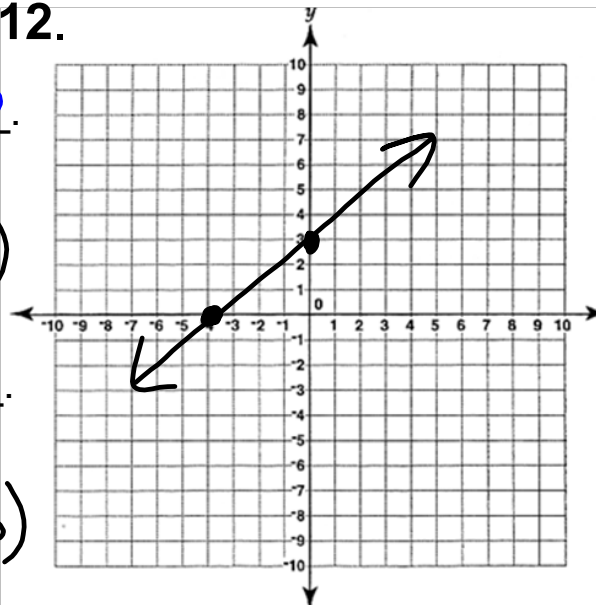$$\frac{-3x}{-3} = \frac{12}{-3}$$
$$x = -4$$

$(-4, 0)$

2. To find the y-intercept let x = 0 .

$$-3(0) + 4y = 12$$
$$\frac{4y}{4} = \frac{12}{4}$$
$$y = 3$$

$(0, 3)$

Now plot the two points and connect them to make the graph.

Example 2: Making a Quick Graph

Graph the equation **3x + 2.5y = 7.5**.

1. To find the x-intercept let y = ___.

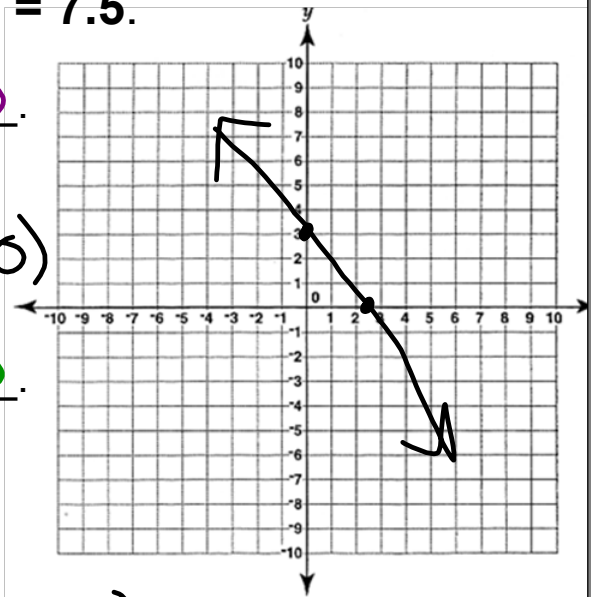$$3x + 2.5(0) = 7.5$$
$$\frac{3x}{3} = \frac{7.5}{3}$$
$$x = 2.5$$

$(2.5, 0)$

2. To find the y-intercept let x = ___.

$$3(0) + 2.5y = 7.5$$
$$\frac{2.5y}{7.5} = \frac{7.5}{2.5}$$
$$y = 3$$

$(0, 3)$

Try It

Graph the equation **-4x + 5y = 20**.

1. To find the x-intercept let y = ___.

$$-4x + 5(0) = 70$$
$$\frac{-4x}{-4} = \frac{20}{-4}$$
$$x = -5$$

$(-5, 0)$

2. To find the y-intercept let x = ___.

$$-4(0) + 5y = 20$$
$$\frac{5y}{5} = \frac{20}{5}$$
$$y = 4$$

$(0, 4)$

5
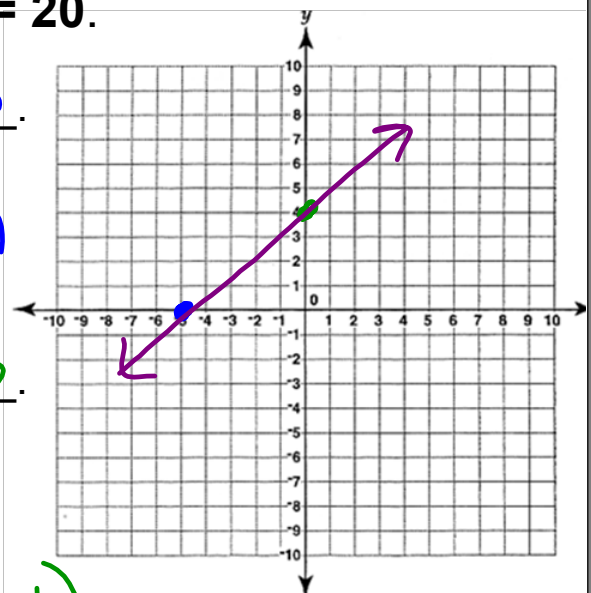
Example 3: Drawing Appropriate Scales
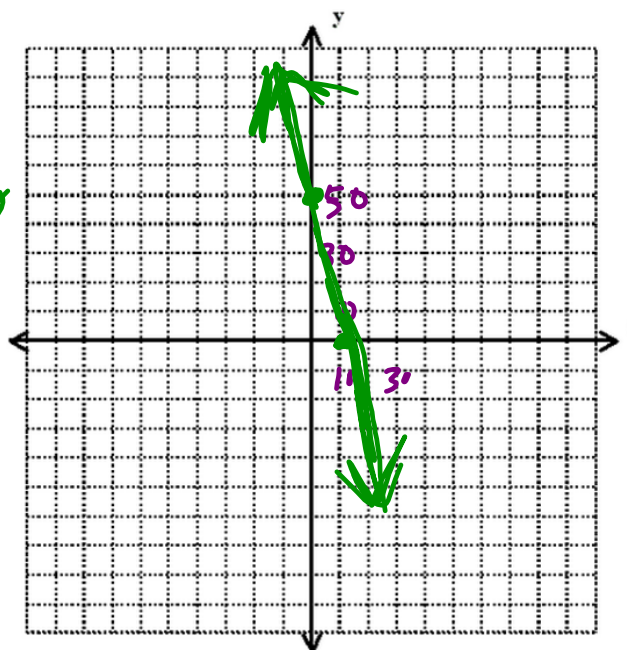Graph the equation **y = 5x + 35**.

x-int
y=0
_____

$0 = 5x + 35$
$-35 \quad -35$

$\dfrac{-35}{5} = \dfrac{5x}{5}$

$\boxed{x = -7}$

$(-7, 0)$

y-int
x=0
_____

$y = 5(0) + 35$

$y = 35$

$(0, 35)$
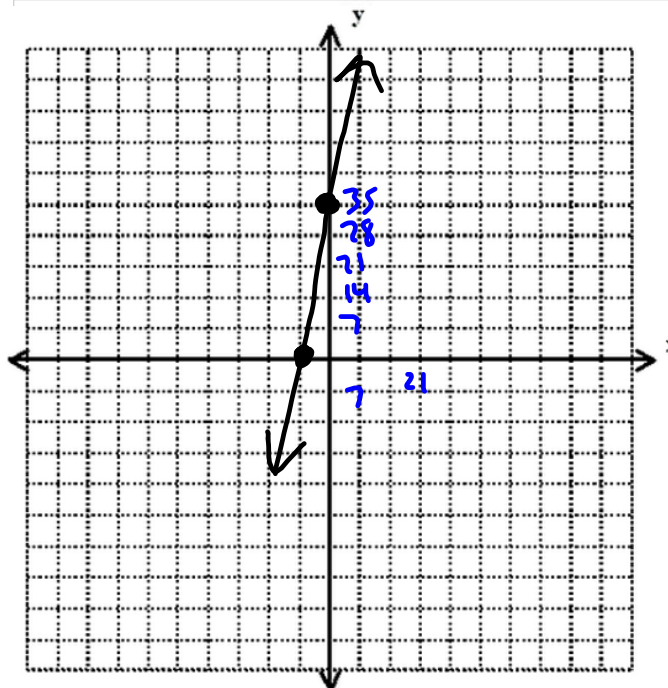
Try It   Graph the equation **y = -5x + 50**.

x-int
y=0
_____

$0 = -5x + 50$
$-50 \quad -50$

$\dfrac{-50}{-5} = \dfrac{-5x}{-5}$

$\boxed{x = 10}$

$(10, 0)$

y-int
x=0
_____

$y = -5(0) + 50$

$y = 50$

$(0, 50)$

6

Summary

EQ: How do you make a quick graph using intercepts?

Find x-int set y=0

y-int set x=0

Find pts ( )
Then Graph

4.3 Homework

Axis Graphing wkst

SHOW WORK ON SEPARATE SHEET