Name:_____ Hour: _____ Date: _____

NOTES: Sections 4.1-4.2 – The Coordinate Plane and Graphing Linear Equations

Goals: #1 – I can plot points in a coordinate plane.

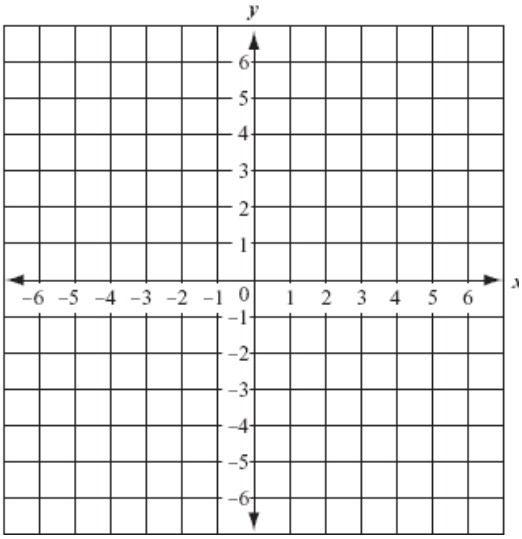
#2 – I can graph a linear equation using a table of values.



Homework: Linear Equation Worksheet

Exploration #1: Work with a partner.

1. Plot the following points:



Point A: $(-2, 3)$

Point B: $(5, 6)$

Point C: $(-4, -1)$

Point D: $(4, -2)$

Point E: $(0, 3)$

Notes:

A _____ is formed by two real number lines that intersect at the _____.

The horizontal axis is called the _____.

The vertical axis is called the _____.

The coordinate plane is divided into four regions called _____.

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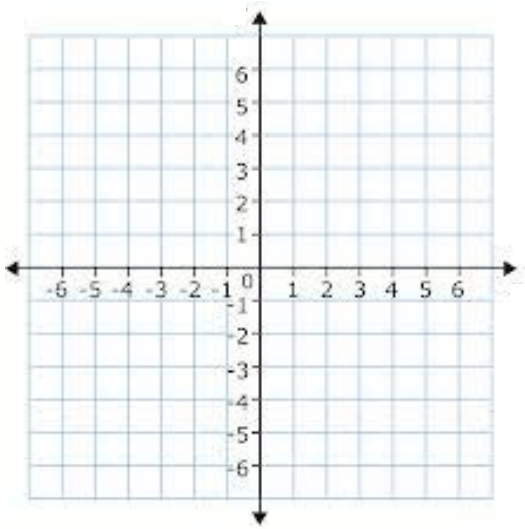

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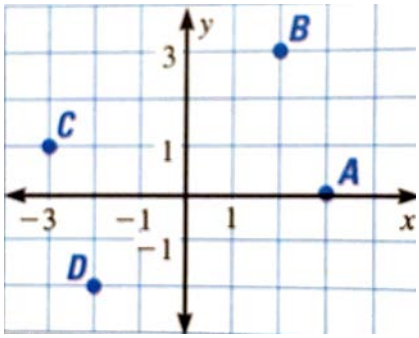
Each point in a coordinate plane corresponds to an _____.

(_____ , _____)

The ____-coordinate tells us how far to move _____ or _____.

The ____-coordinate tells us how far to move _____ or _____.

Example #1: Write the ordered pairs that correspond to points *A*, *B*, *C*, and *D*. What quadrants are these points in?



a. *A*: b. *B*: c. *C*: d. *D*:

Exploration #2: Work with a partner.

1. Plot the following points:

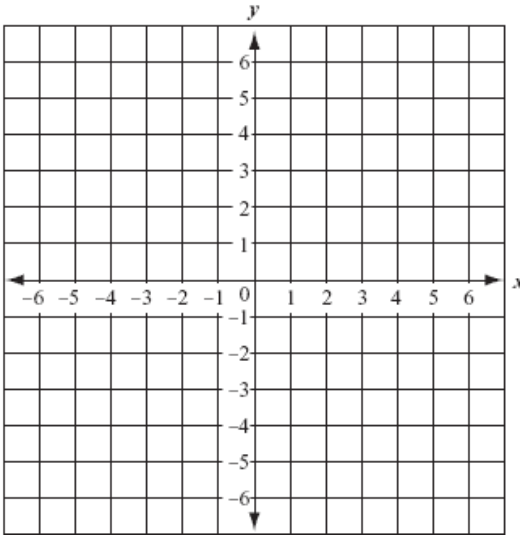
   Point A: $(-5, 6)$

   Point B: $(1, -3)$

   Point C: $(3, -6)$

   Point D: $(-3, 3)$

   Point E: $(-1, 0)$



What do these points form?

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Notes:

A _____ is an equation that can be written in the form:

$$Ax + By = C$$

An equation that is written in _____ form is when we solve the equation for _____.

A _____ of an equation is an _____ (x, y) that makes the equation true. (Just like when we checked our solutions when we solved equations!)

Example #2: Determine whether the ordered pair is a solution of $x + 2y = 5$.

a. $(1, 2)$ b. $(7, -3)$

Example #3: Write the equation $6x + 3y = 18$ in function form.

You practice:

1. Determine whether the ordered pair is a solution of $2x + y = 1$
   a. $(-3, 7)$ b. $(\frac{5}{2}, -6)$

2. Write the equation $4y - 3x = -28$ in function form.

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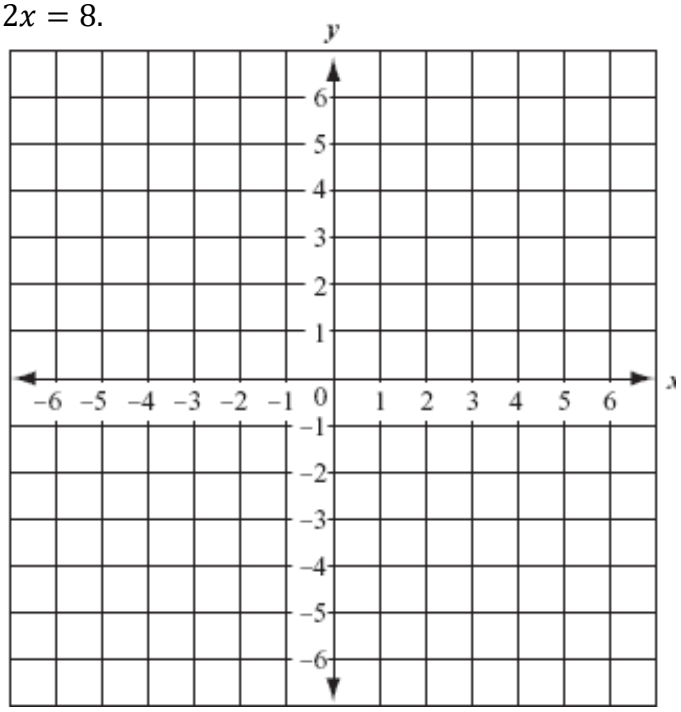
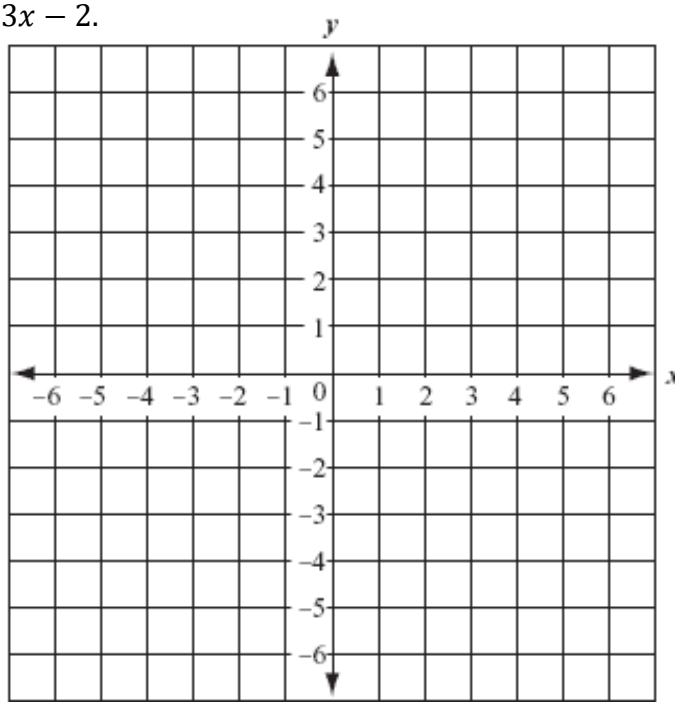
Example #3: Use a table of values to graph $4y - 2x = 8$.

x	y



You practice: Use a table of values to graph $y = 3x - 2$.

x	y



CHALLENGE: How could you graph this line a different way?