Graphing Linear Equations

Chapter 4
Section 2

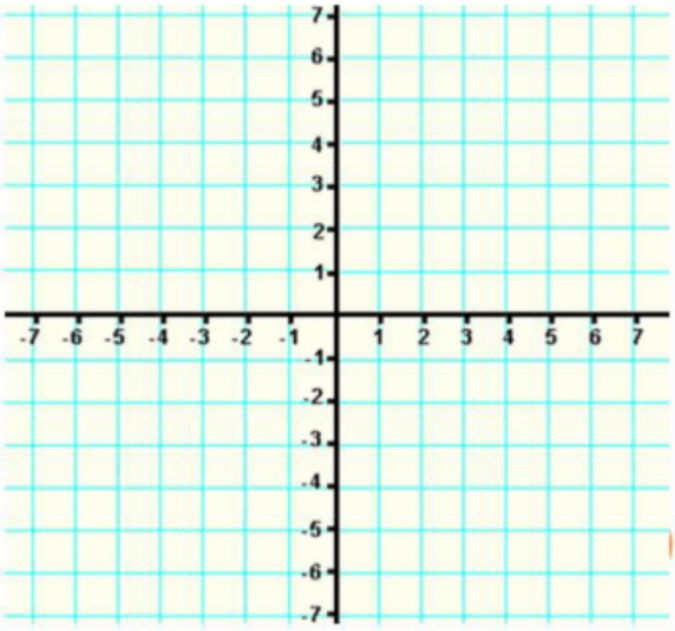
Graphing Linear Equations

- Steps to Graphing Linear Equations:
  - 1. Rewrite the equation in function form (solve for y)
  - 2. Draw an x-y table
  - 3. Find what y is when x= -2, -1, 0, 1, 2
  - 4. Rewrite the x and y values into ordered pairs
  - 5. Plot the ordered pairs on the graph

Graphing Linear Equations: Example

$y=2x+1$

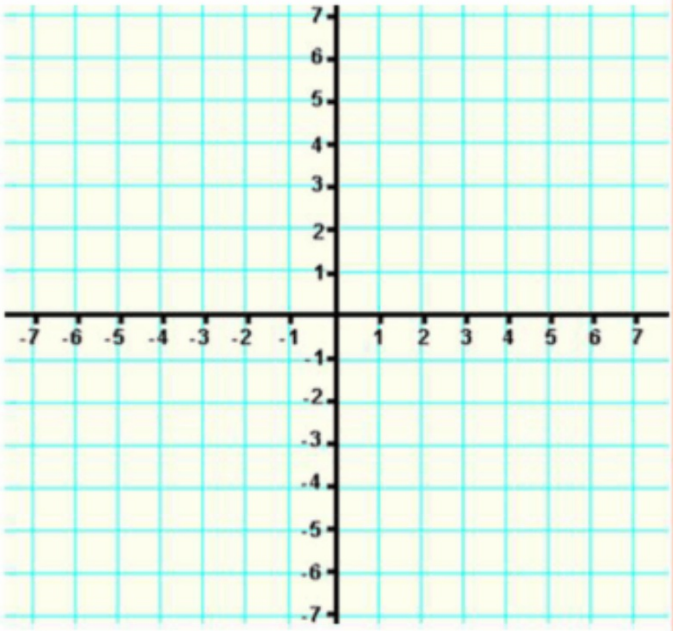
Input X	Output Y	Work
-2		
-1		
0		
1		
2		



Graphing Linear Equations: Example

$y=-3x+2$

Input X	Output Y	Work
-2		
-1		
0		
1		
2		



$-8x+4y=-12$

$+8x \qquad +8x$

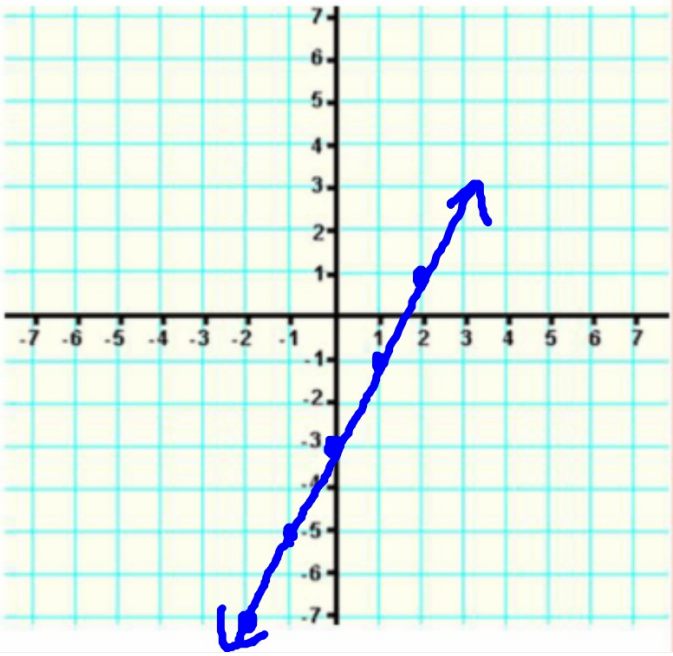
Graphing Linear Equations: Example

$y = 2x - 3$

~~$-8x+4y=-12$~~

$\frac{4y}{4} = \frac{8}{4}x - \frac{12}{4}$

Input X	Output Y	Work
-2	-7	$2(-2)-3$
-1	-5	$2(-1)-3$
0	-3	$2(0)-3$
1	-1	$2(1)-3$
2	1	$2(2)-3$



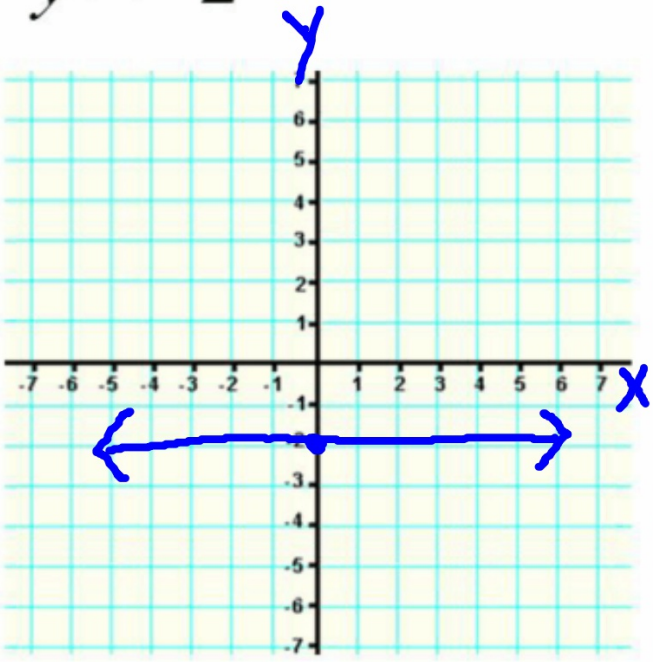
Horizontal Lines

- An equation is a horizontal line if it does not have an x variable. (only has a y variable)

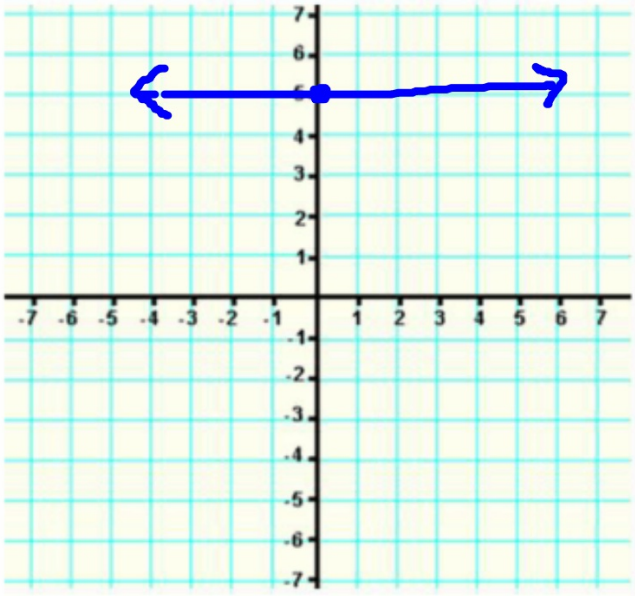
- Example:
  - y=2
  - y=-1
  - y=5
  - y=0

Horizontal Lines

$y = -2$



$y = 5$



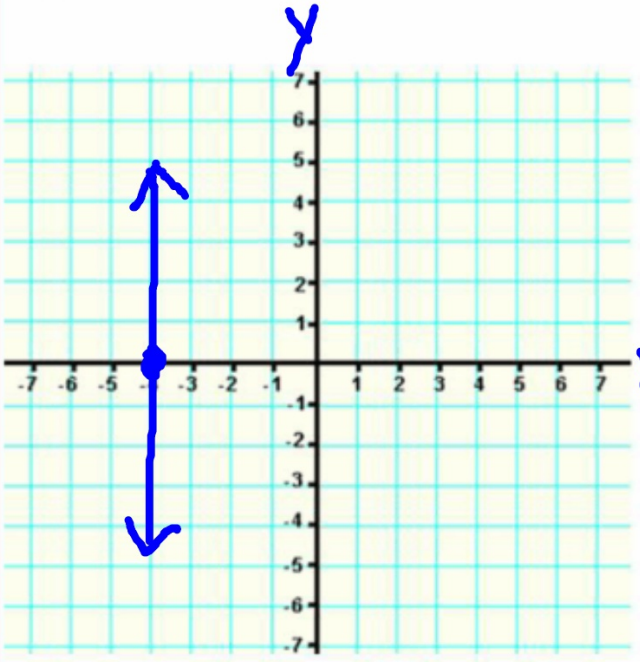
Vertical Lines

- An equation is a vertical line if it does not have a y variable (only has an x variable)

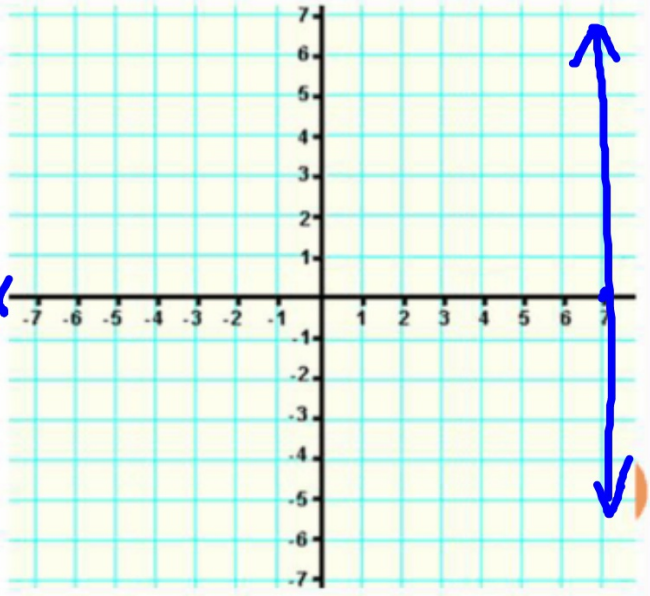
- Example:
  - x=2
  - x=-1
  - x=5
  - x=0

Vertical Lines

$x = -4$



$x = 7$



Class Work

- Worksheet

HOMEWORK

- Page 214 #12, 13, 15, 16, 32- 34, 36, 37, 40, 44, 45