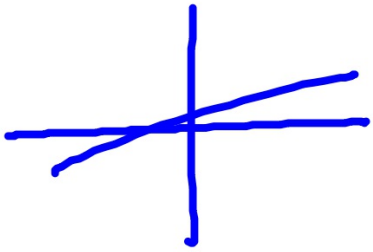
Quick Graphs Using Slope-Intercept Form

Chapter 4
Section 6

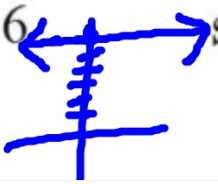
Slope-Intercept Form



- y=mx+b
  - Where m is the slope and b is the y-intercept and (x,y) is a point

Examples:

1. $y = 3x + 4$ Slope: 3 Y-Int: (0,4)
2. $y = -x + 2$ Slope: -1 Y-Int: (0,2)
3. $y = 5x - 3$ Slope: 5 Y-Int: (0,-3)
4. $y = 6$ Slope: 0 Y-int: (0,6)



Graphing Using Slope and Y-Intercept

- Steps to Graph using Slope and y-intercept
  - Write the equation in slope intercept form (y=mx+b)
  - Find the slope and y-intercept
  - Plot the point of the y-intercept (0,y)
  - Graph the slope starting at the point from the y-intercept
  - Draw a line through the two points

EXAMPLE:

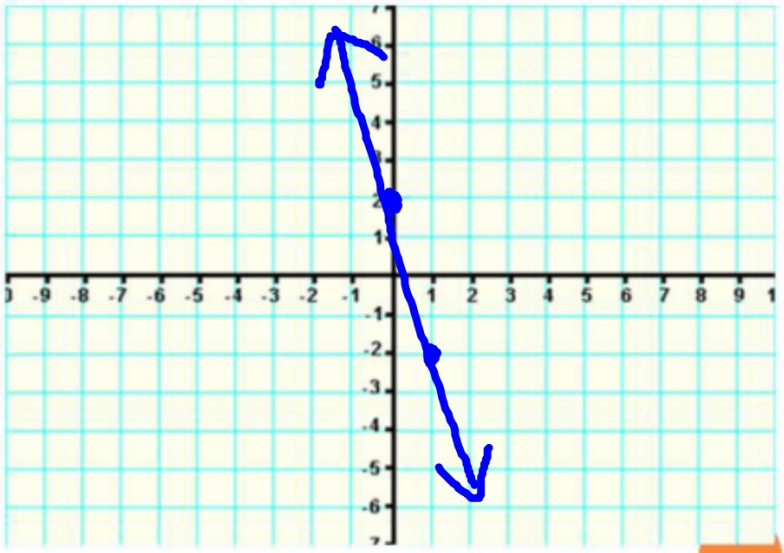
1. $y = -4x + 2$

$m = -4$

$y - \text{int} = 2$

y - int point : (0,2)

$m = \frac{-4}{1} = \frac{\text{rise}}{\text{run}}$



EXAMPLE:

- 2. $6x + 2y = 12$

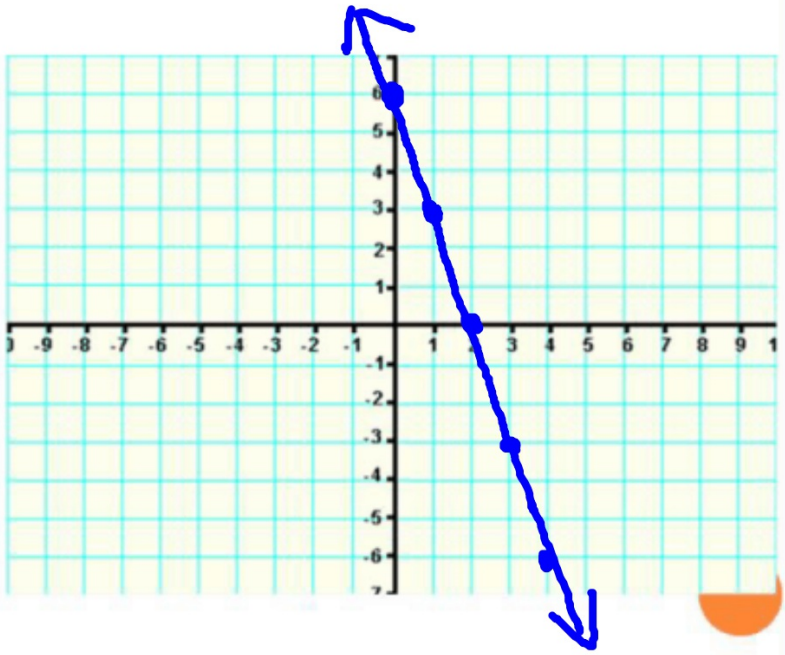
$-6x \quad -6x$

$\frac{2y}{2} = \frac{-6x}{2} + \frac{12}{2}$

$y = -3x + 6$

$m = -\frac{3}{1} = \frac{\text{rise}}{\text{run}}$

$y\text{-int} = 6$



EXAMPLE:
GRAPH USING SLOPE AND Y-INTERCEPT

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

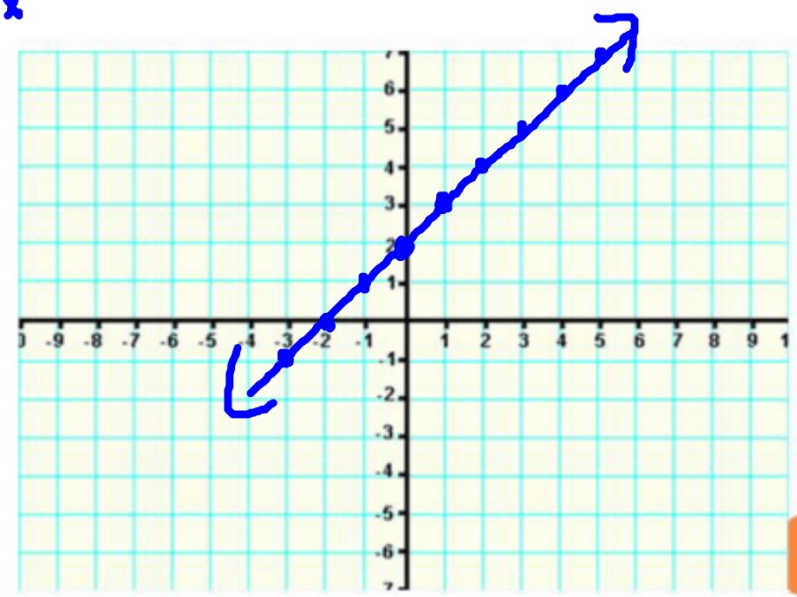
$+3x \quad +3x$

$\frac{3y}{3} = \frac{3x}{3} + \frac{6}{3}$

$y = x + 2$

$m = \frac{1}{1} = \frac{\text{rise}}{\text{run}}$

y-int = 2

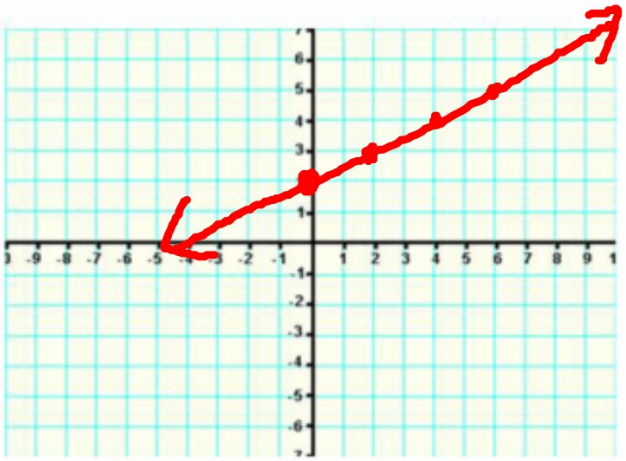


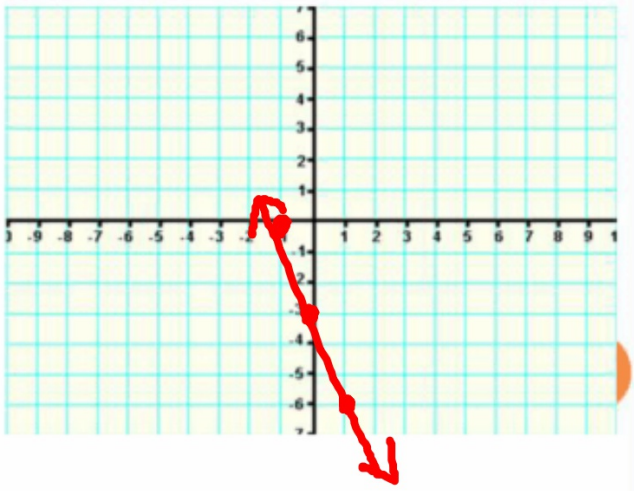
EXAMPLE:

- Graph the following using the slope and the y-intercept:

4. (0,2) $m = \frac{1}{2}$

5. (0,-3) $m = \frac{-3}{1}$





Class Work

- Page 244 #5-10 and 22

HOMEWORK

- Page 244 #13-21, 37-39