Objective:

Make connections between algebraic and graphical representations of linear functions.

Name:

Period:

Date:

Essential Question:

How do I graph a line using slope-intercept equation AND how do I get slope-intercept equation from a graph?

Questions:

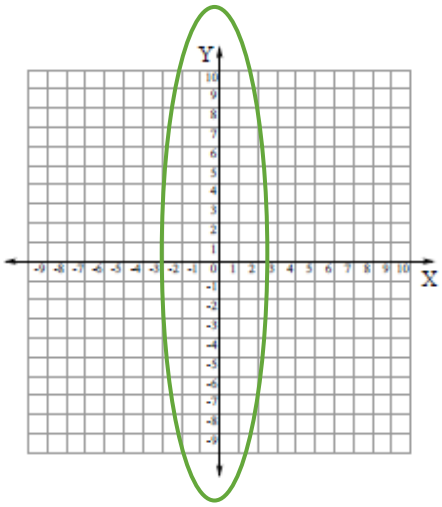
Notes:

Slope-Intercept form of a line:

$$y = mx + b$$

m = slope = $\frac{\text{rise}}{\text{run}} = \frac{\Delta y}{\Delta x} = \frac{y2 - y1}{x2 - x1}$

b = y-intercept = $(0,b)$



Remember the song:

- Find the y-axis. Put the intercept on.
- Then do rise over run.

Summary:

What song?

Questions:

Notes

Let's get that y alone!

$$6x + 3y = 1$$

- 1st undo + or - to move the constant OR the x to the other side of the =

$$6x + 3y = 1$$
$$-6x \qquad\qquad -6x$$
$$+ 3y = 1 - 6x$$

- Divide to make one y. REMEMBER when you divide a polynomial; you must divide EACH TERM of the polynomial!

$$\frac{3y}{3} = \frac{1 - 6x}{3}$$
$$y = 1/3 - 2x$$

- What is the slope?

- What is the y-intercept?