GRAPHING LINEAR EQUATIONS

SLOPE INTERCEPT FORM: $y = mx + b$

SLOPE:

Represented by m in the equation

$$\frac{rise}{run}$$

Y-INTERCEPT:

Represented by b in the equation

Where line crosses the y axis

$$(0,b)$$

USING SLOPE:

Positive:

$$\frac{rise}{run}$$ ← How far UP / ← How far RIGHT

Negative:

How far DOWN → / How far RIGHT → $$\frac{rise}{run}$$

STEPS:

1. Plot the y-intercept
2. Use the slope to plot more points

I'll do algebra, I'll do trig, and I'll even do statistics, but graphing is where I draw the line!

OH NO! YOU RAN OUT OF GRAPH, NOW WHAT?

1. Don't panic
2. Go back to the <u>y-intercept</u>
3. Go in the opposite directions for slope
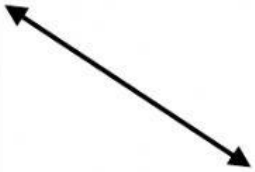   <u>Positive:</u> down and left
   <u>Negative:</u> up and left
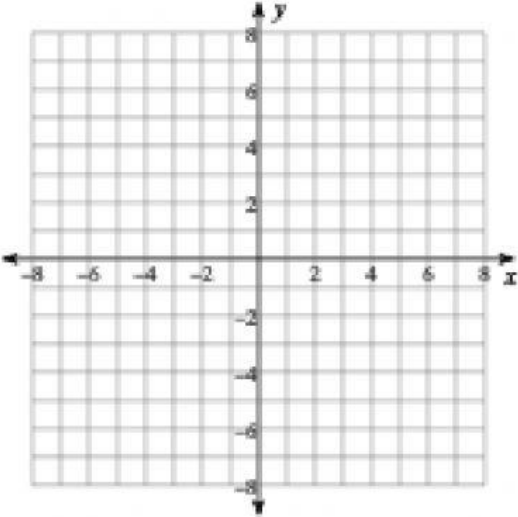
REMEMBER:

$$y = x + 8 \rightarrow y = \frac{1}{1}x + 8$$

$$y = 2x \rightarrow y = \frac{2}{1}x + 0$$
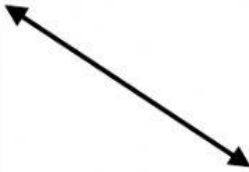
GRAPHING LINEAR EQUATIONS

			UP DOWN RIGHT LEFT
Graphing Tool Kit			

Example: Graphing Equations with Positive Slope

$$y = \frac{1}{4}x + 2$$
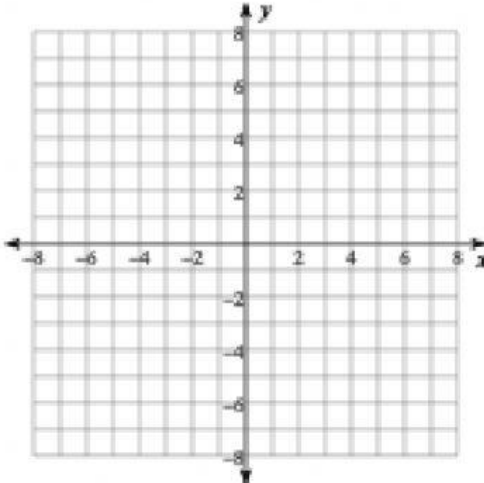
Step 1: Plot the y intercept	y-int $= 2$	
Step 2: Use the slope to create more point from the y intercept	Slope $= \frac{1}{4}$	

GRAPHING LINEAR EQUATIONS

Graphing Tool Kit			
•			UP DOWN RIGHT LEFT

Example: Graphing Equations with Negative Slope
$y = -\dfrac{2}{3}x + 5$

Step 1: Plot the y intercept	$y - int = 5$	
Step 2: Use the slope to create more point from the y intercept	$Slope = -\dfrac{2}{3}$	