Name: Date: Period:

How to Graph a Line

Step one: Make sure your equation is in the form y = mx + b. If it is not, you must solve for y FIRST!!

Step two: Identify the slope (m) and the y-intercept (b).

Remember to **ALWAYS** write slope as a fraction because it represents the $\frac{\text{vertical change}}{\text{horizontal change}}$

Step three: Write appropriate ARROWS next to each slope value

- Since the top # represents the vertical change, use up arrow (↑) if positive & down arrow (↓) if negative
- Since bottom # represents the horizontal change, always use left to right arrow (→) because we will always read our graph from left to right.

For example: $m = \frac{2}{3}\ \frac{\uparrow}{\rightarrow}$ $m = \frac{-1}{4}\ \frac{\downarrow}{\rightarrow}$

Step four: Plot and **LABEL** the y-intercept on the **y-axis**.

Step five: Use the slope (and your arrows) to plot the next point FROM THE Y-INTERCEPT.

Step six: Repeat step five, but instead of starting at the 2nd point you plotted, and plot a third point.

MAJOR REMINDERS FOR EVERY LINE YOU GRAPH:

- Extend your line to the full extent of the graph AND draw arrows on each end.
- Label your line with the equation.
- Do **NOT** make your points HUGE. The larger the point, the less accurate your graph.
- If you run out of room plotting your points, do the OPPOSITE of **BOTH** arrows of your slope.

Here's a little song to help you with graphing…

Graphing a Line (three blind mice tune)

Graphing a Line.
Graphing a Line.
First solve for y.
First solve for y.
What is the slope and the y-intercept?
The slope is the number that's next to the x.
But where do we start? On the y-axis.
Graphing a line.