Algebra RH

## Essential Questions: What is slope-intercept form? How is it used to graph a line?

Do Now: Using the intercept method, graph the following 2 equations and then complete the table below.

1. $y+3=x$
2. $x+3 y-3=0$


| Original Equation | Slope | $y$-intercept | Equation in $y=m x+b$ <br> form |
| :---: | :---: | :---: | :---: |
| $y+3=x$ |  |  |  |
| $x+3 y-3=0$ |  |  |  |

## SLOPE-INTERCEPT FORM OF AN EQUATION

$$
y=\mathrm{m} x+\mathrm{b}
$$

Graphing Equations using the Slope-Intercept Method

1. Put the equation in " $y=m x+b$ " form if it is not already.
2. Start by plotting the $y$-intercept $(0, b)$ as your first point.
3. Use the slope $\frac{\text { rise }}{\text { run }}(m)$ to plot your next point.
4. Draw a line through the two points.

Example: Graph $3 x+y=2$ using the slope-intercept method.


On a piece of graph paper, graph the following equations using the slope-intercept method.

1. $y=-\frac{4}{5} x+3$
2. $2 x+8=4 y$
3. $x+y=-1$
4. $-2 x+8=4 y$
