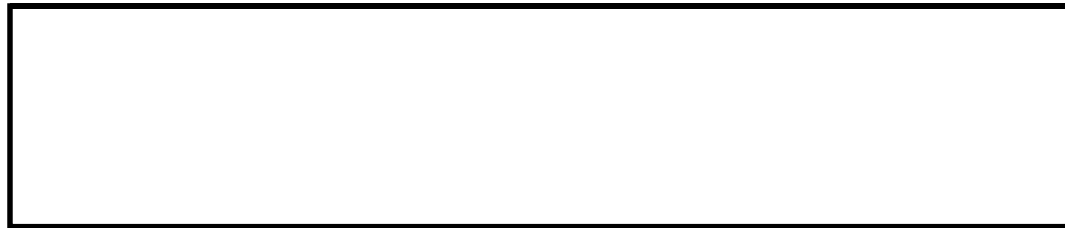


## 5-3 Slope-Intercept Form

Alg 1

What are intercepts?

### Slope-Intercept Form



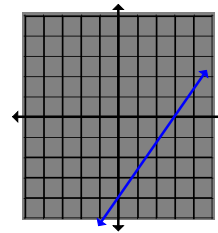
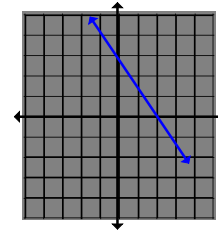
**Example 1: Write an equation given the slope and y-intercept**

**Write the equation of the line whose slope is 3 and whose y-intercept is 5**

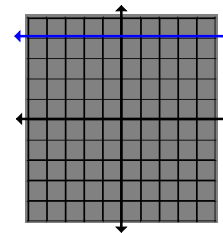
**Write the equation of the line whose slope is  $\frac{1}{4}$  and whose y-intercept is -6**

What are the 2 pieces of information we need in order to write an equation in slope-intercept form?

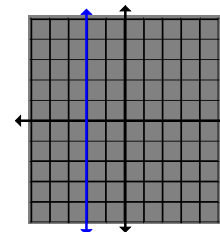
Example2 : Write an equation given 2 points



Horizontal Line



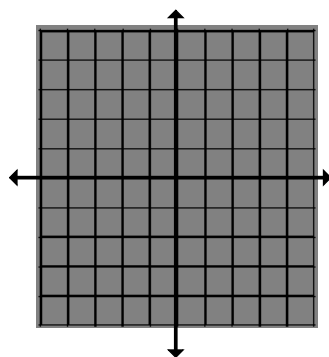
Vertical Line



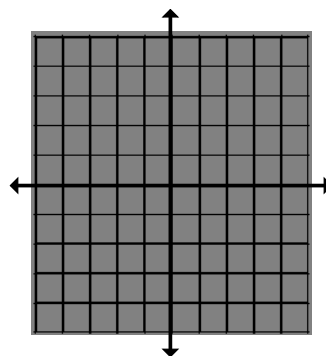
Example 3 : Graph an equation in Slope-Intercept Form

**Hint:** 1.  
2.

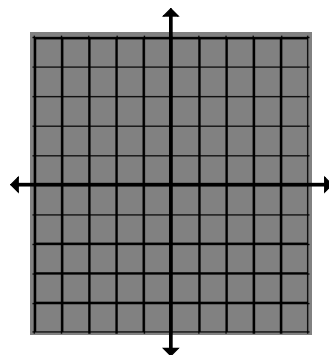
Graph  $\frac{1}{2}x - 5$



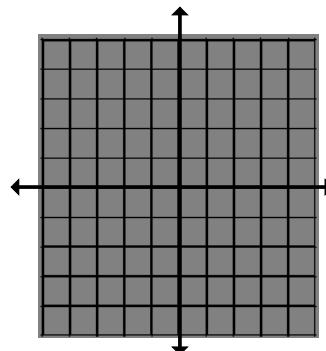
Graph  $-\frac{2}{3}x + 1$



Graph  $y = 3$

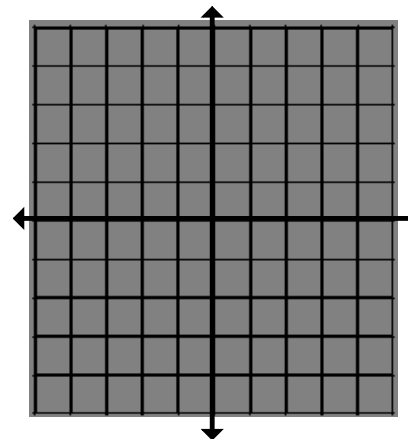


Graph  $x = 3$

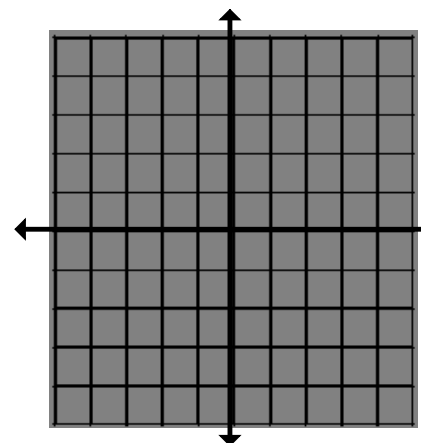


**Example 4: Graph an Equation in Standard Form**

**Graph  $5x + 4y = 8$**



**Graph  $2x - 3y = 12$**



**Example 5: Write an Equation in Slope-Intercept Form**

**The ideal maximum heart rate for a 25-year old who is exercising to burn fat is 117 beats per minute. For every 5 years older than 25, that ideal rate drops 3 beats per minute.**

- 1. Write a linear equation to find the ideal maximum heart rate for anyone over 25 who is exercising to burn fat.**

**Let  $r =$**

**$a =$**

- 2. Graph the equation**

