

# Linear Equations – Slope-Intercept Form

$y = mx + b$

- Dependent variable →
- It is also our y-coordinate
- Slope
- Rate of change
- Rise over run
- Independent variable
- It is also our x-coordinate
- y-intercept
- Where the line we are graphing crosses the y-axis

## Identify the slope and y-intercept of each equation

(HINT: Make sure the equation is in slope-intercept form!)

$$y = 3x + 5$$

$$y = \frac{1}{2}x$$

$$y = -x$$

$$y = 3$$

$$x = -5$$

$$y = -\frac{3}{4}x - \frac{5}{4}$$

$$2y = 4x + 8$$

$$3y = x + 2$$

# Graphing – Slope-Intercept Form

1. Make sure the equation is in slope-intercept form
2. Identify the slope and y-intercept
3. Graph the y-intercept on the y-axis
4. Graph two points using the slope (make sure to write directions before graphing)

2 special cases	
H.O.Y.	V.U.X.
H -	V -
O -	U -
Y -	X -

Graph the following equations on the same graph below.

1.  $y = 2x - 3$

4.  $x = 3$

2.  $y = -x + 5$

5.  $y = -\frac{3}{4}x + 6$

3.  $y = \frac{1}{2}x$

6.  $y = -2$



