Name:_____   Date:_____

Notes
Algebra Section 5.5
Pages 319-324

Goal: "You will write equations of parallel and perpendicular lines"

Vocabulary:

Parallel: Two lines are always the same _____ apart and will never _____.

    Parallel lines have the same _____.

    Symbol:

Determine which lines, if any, are parallel. (put in slope-intercept form first)

1.
a. $y = 5x - 3$ **b.** $x + 5y = 2$ **c.** $-10y - 2x = 0$

2.
a. $y = -3x + 1$ **b.** $-x + 3y = 1$ **c.** $2x - 6y = 4$

3.
a. $-1.5y + 4.5x = 6$ **b.** $y = 3x - 8$ **c.** $2x + 6y = -3$

Write an Equation with the Given Information:

A line is parallel to $y = 2x - 1$ and has a y-intercept of -5

A line is parallel to $y = -\frac{1}{3}x + 4$ and has a y-intercept of 2

Write an Equation with the Given Information:

1) Passes through $(-3, -5)$ $||$ to $y = 3x - 1$

2) What do you know? $x=$ $y=$ $m=$ $b=$

3) Plug the known values into $y = mx + b$.

4) Solve for the unknown value.

5) Write the equation.

   Plug in the values for m and b.

   Leave x and y as variables.

Try These: Follow the steps above.

1) Passes through $(-2, 11)$ $||$ to $y = -x + 5$

2) Passes through $(-3, 3)$ $||$ to $y + 2x = 1$