Welcome to Class!!

You will need:

~ Pencil

~ Highlighter

~ Ruler

~ Binder

~ Vocabulary Sheet

Homework:

Handout 1.3 More About Linear Equations

Stick Quiz

8/28/18

1) Write 0.0002718 in scientific notation.

2.718×10^{-4}

2) Find the slope given two points: $(-1, 2)$ and $(0, 3)$.

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{3-2}{0+1} = \frac{1}{1} = \boxed{1}$

3) Find the equation of the line that is perpendicular to $y = -3x - 2$ and passes through $(6, 2)$.

3) Find the equation of the line that is perpendicular to $y = -3x - 2$ and passes through $(6, 2)$.

$m = \frac{1}{3}$

$y = \frac{1}{3}x + b$

$2 = \frac{1}{3}(6) + b$

$2 = 2 + b$

$-2 \quad -2$

$b = 0$

$y = \frac{1}{3}x + 0$

$\boxed{y = \frac{1}{3}x}$

Scratch

$\frac{1 \to 6}{3 \to 1} = \frac{6}{3} = 2$

(4) Write the equation.

Perpendicular to $y = -\frac{2}{3}x + 1$ passes through $(2, 1)$.

$m = \frac{3}{2}$

$y = \frac{3}{2}x - 2$

$y = \frac{3}{2}x + b$

$1 = \frac{3}{2}(2) + b$

$1 = 3 + b$

$b = -2$

Unit 1.3: More About Linear Equations

Vocabulary:

Point-Slope Form	$y - y_1 = m(x - x_1)$
Standard Form of a Line	$Ax + By = C$ where A, B, and C are integers and A is positive. (positive or negative whole #)

Unit 1.3: More About Linear Equations

Examples:

1) A line passes through $(-5, 2)$ with a slope $\frac{3}{5}$.

1) Through $(-5, 2)$ $m = \frac{3}{5}$

$y - y_1 = m(x - x_1)$

$y - 2 = \frac{3}{5}(x - -5)$

$\boxed{y - 2 = \frac{3}{5}(x + 5)}$

Example - Writing an Equation Point-Slope

2) (3, 2) and (5, 8)

$m = 3$

$y - 2 = 3(x - 3)$ or $y - 8 = 3(x - 5)$

3) (−5, 0) and (0, 7)

$m = \frac{7}{5}$

$y - 0 = \frac{7}{5}(x - -5)$

$y = \frac{7}{5}(x + 5)$

$y - 7 = \frac{7}{5}(x - 0)$

$y - 7 = \frac{7}{5}x$

Vocabulary:

Point-Slope Form	$y - y_1 = m(x - x_1)$
Standard Form of a Line	

Example - Writing an Equation in Standard Form:

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

$-\frac{3}{4}x \quad -\frac{3}{4}x$

$-4\left(-\frac{3}{4}x + y\right) = (-5)(-4)$

$3x - 4y = 20$

$A = 3 \quad B = -4 \quad C = 20$

Example - Writing an Equation in

WB?

HW: 1.3 #1-8 and #13 & 14

5) $y = \frac{2}{5}x - 3$

$-5\left(-\frac{2}{5}x + y\right) = (-3)(-5)$

$2x - 5y = 15$

Now what?

Work on:

- Handout 1.3

Must be completed by:

- Wednesday 8/29

If you finish early:

- Create and graph your own linear equations.
- Create a real life example of a linear function.

I can:
1) Write and graph equations for lines
2) Convert between different linear forms