Hey everybody,

I hope all is well and everybody and their families are healthy. Remember to stay active during this time however possible. There's lots of ways to stay active around your house. I built a pull up bar in my garage out of 2x4's so I can get some workouts in. Make sure you guys are staying healthy and active as much as possible, both mentally and physically. I have put together some written worksheet assignments for the sophomores and juniors. Freshmen have online IXL work for the week. Both sections have notes to refer to that will help with the problems. Sophomores/juniors, if you want IXL work to help with the concepts I can post those also.

Sophomores and juniors, I was not able to put in multiple choice answers with this one, but refer to the examples and read thoroughly. I can write up some more examples to post you can refer to if needed. We can also possibly set up a time next week to start a video tutoring time if possible. During that time I can answer questions and write out the sequential steps and show you live on video if possible. If you would like to do a zoom chat and I can walk you through problems, let me know and I can work on setting it up.

Freshmen, read the steps. It is all IXL.com work for this week. If you need log in info, please email me and I will send you your log in info or set something up for you if needed. It is a review of linear equations. Please refer to the feedback and the written steps to correct your mistakes if you are answering problems incorrect. The immediate feedback with corrected steps is what makes the program good. Make sure you read through the steps.

Everybody stay safe, stay mentally and physically healthy, eat a well balanced diet, and find some ways to engage yourselves in a healthy endeavor you have a passion for. Read on it, research it, write on it, find what you want to do with it, find what you love about it, and do it! Something other than video games. Everybody has a niche they have a passion for they can share with others to enrich their lives as well. Find that something you love that helps the person next to you, and learn everything about it that you can during this time. Enjoy the time! Use the time! Enjoy using the time for learning about something else you enjoy!

Miss y'all, Becker

WHCS Distance Learning

Algebra I – Freshmen

Online supplement assignments

1. IXL online assignments with feedback
    a. www.ixl.com
    b. Log in
    c. "Learning" Tab
    d. "Algebra 1" Tab
    e. Section S – Linear Equations
2. Section S – Linear Equations
    a. Part 3 – Find the slope of a graph
    b. Part 4 – Find the slope from 2 points
    c. Part 6 – Slope intercept form: find the slope and y-intercept
    d. Part 7 – Slope intercept form: graph an equation
    e. Part 8 – Slope intercept form: write an equation from a graph
    f. Part 9 – Slope intercept form: write an equation
    g. Part 11 – Slope intercept form: write an equation from a word problem
3. Formulas/Definitions
    a. **Slope**: $The\ steepness\ of\ the\ line, or\ rate\ of\ change.$ The greater the number, the more steep the line. The smaller the number and as fraction slopes become smaller (larger values in the denominator), the more flat the line will appear. In the $slope\ intercept\ equation$, this value will be $attached\ to\ the\ variable$.
        i. Formula: $m = \frac{y_2 - y_1}{x_2 - x_1}$
    b. **Y-Intercept:** *where the graph of a linear equation touches the y-axis.* Where the $X\ coordinate$ of a linear equation is $zero.$ In sl0pe intercept form, this is often shown as the letter 'b.'
        i. $y = 2x + 3$; When we plug in 0 for our $X\ coordinate$ and solve for y, it will give us the value of y when x equals $zero.$ This tells us where the line touches the $y - axis$, otherwise known at the $y - intercept$.
        ii. $y = 2(0) + 3$
        iii. $y = \cancel{2(0)} + 3$
        iv. $y = 3$
            1. You can plug in ANY number for x and solve the equation for y and it will represent a $coordinate\ point$ on the graph of the linear equation.
    c. **Slope Intercept Form:** The y-intercept + slope to form to generate 2 points in order to graph a linear equation. Point #1 is the y-intercept. Point #2 is found by applying the

slope *from the y-intercept* to find where the second point would be. Connect the 2 dots and you have a graph of a linear equation.

i. $y = mx + b$

1. $m = slope$
2. $b = y - intercept$
3. $x = variable$
4. $y = variable\ \#2$

d. **Table of Coordinates:** If you assign any number for x and solve the equation, it will generate a value for y that will be a $(x, y)\ coordinate\ point$ that represents a value of the linear equation.

i. $y = 2x + 3$

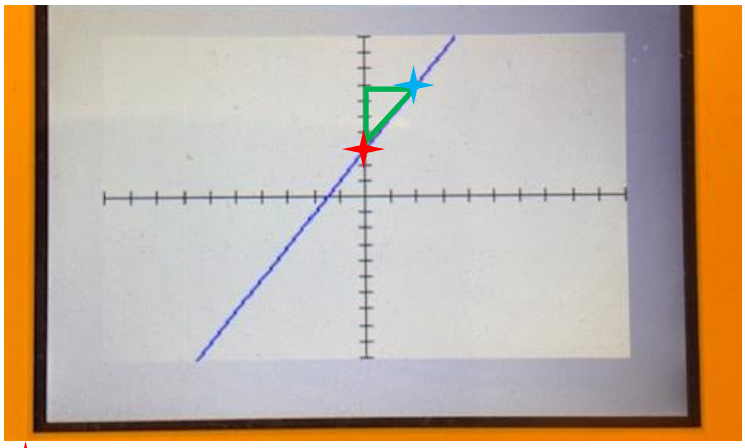
ii. I will assign 5 numbers for x to generate a $y\ coordinate$

X	$y = 2x + 3$	Y
-2	$y = 2(-2) + 3$	-1
-1	$y = 2(-1) + 3$	1
0	$y = 2(0) + 3$	3
1	$y = 2(1) + 3$	5
2	$y = 2(2) + 3$	7

iii. The coordinates are:

1. $(-2, -1); (-1, 1); (0, 3); (1, 5); (2, 7)$

iv. Graph



Y-intercept

Point #2 to generate a linear equation

Slope: represented by moving 2 units up, 1 unit over

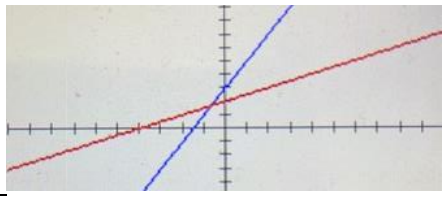
Or 4 units up and 2 units over. Any ratio that equals the slope of 2.

$\frac{2}{1}; \frac{4}{2}; \frac{6}{3}; \frac{8}{4}; \frac{10}{5}; etc.$

v. To compare: I have also created a graph of both lines

1. $y = 2x + 3\ the\ steeper\ line\ in\ blue\ that\ sits\ above$

2. $y = \frac{1}{2}x + 2$ *the flatter line in red that sits below*
3. Note the difference in the steepness of the lines and the y intercept

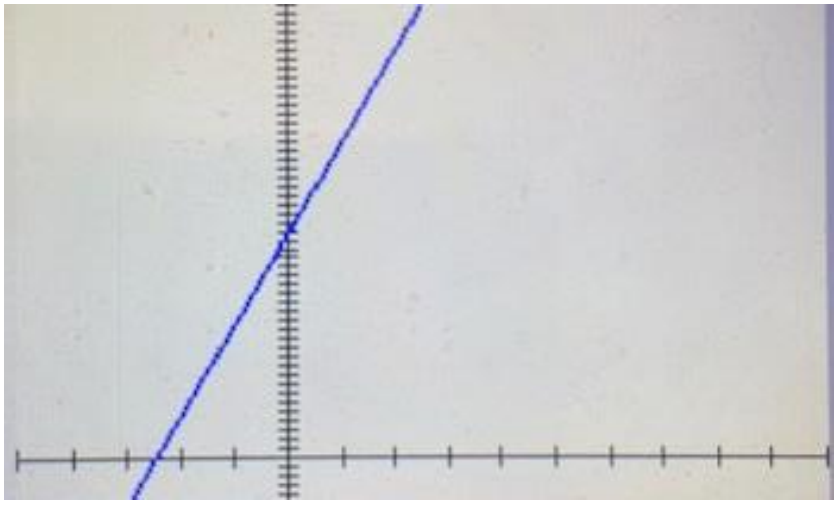


e. **WORD PROBLEMS:** a real world example using $slope$ as a rate of change and a $y\ intercept$ as a starting point.

i. Sally Sue has a job gluing shoe goo for a business called Who's Shoes. She gets paid $\$10\ per\ hour$ for what she does and has $\$25$ in her wallet. Write an equation to represent the amount of money Sally Sue has with regard for the number of hours she works.

1. Answer: the $rate\ of\ change$ is her hourly rate of pay. In this case, that is $\$10\ per\ hour$. The amount of money she starts with must be included also, so that $\$25$ does not have a rate of change, therefore it is our $constant, or\ y - intercept$.
2. The amount of CASH (c) Sally Sue has depending how many hours (h) she works can be represented by:
3. $c = 10h + 25$
    a. Where $c\ (cash)$ is my $y\ variable\ or\ axis$ and $h(hours)$ is my $x\ variable\ or\ x\ axis$. I can also write my equation as:
4. $y = 10x + 25$

ii. Graph



Note: the $y - intercept$ is at $0\ hours\ (x\ axis)$ at starts at $\$25\ on\ the\ y\ axis$ *The slope is up* $10\ units\ on\ the\ y\ axis\ (dollars)\ and\ over\ one\ unit\ on\ the\ x\ axis\ (hours\ worked)$*to represent earning* $\$10\ per\ hour\ and$

starts from the y intercept value of $25 *on the y axis.*