Algebra 1, $\qquad$ Band C

## Algebra 1, Quarter 3 Benchmark: Make Your Own Design!

Introduction:


## Tutorial on Finding Equations of Lines (TASK \#3)

## 1. Slope-intercept form

First you find the coordinates that intercept the box then you use you formula $y 2-y 1$ and at the bottom x2-x1 to find your slope which also is known as m .
[First you would find the $y$ intercept then you would find the rise over run. Is the amount of points that go up and across for example $2 / 1$ and the top number would be the rise and the bottom the run. And this would help us plot points

## 2. Point-slope form

[First you find the points then you plug them in the first one being the slope of course. Than the second one is like this $(x+-3)-1$ if the point turns negative once you plug it in then you get your point slope form.]

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First you get your own slopes from the equation then use the same formula above. Then you find $m$ and your product would be something like $x-3$ then you plot it on your coordinate plane to see what it is.

## 3. Horizontal lines

[First you would look at the axis, is it x or y in this case since it is horizontal it would be y meaning you would have to do the line horizontal. Then you would see the point and plot the line.]
[Fir you would see where the line intercepts then you would plot it it on the y axis.]

## 4. Vertical lines

[First you find the place where the x axis intercepts. And then, find the line and the number that gives you your equation for your Vertical line!]
[First you would look at your number in your equation whatever that may be and you will see $x=$ ? And depending whether that number is a positive or negative you find that then plot if with the line going straight down.]

## 5. Parallel lines

]Well first you have to find the slope and the relation between the 2 numbers to get the points you're trying to pass through. But the slope has to be the same in order to be parallel. It can also be a different y intercept and the lines will still be parallel.

## 6. Perpendicular lines

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[Well basically perpendicular slopes are slopes that intersect at a 90 degree angle. You can also find the point slope when you don't have the $y$ intercept.But if you do have $m$ you flip it over and do the opposite of what the fraction is.

Now that we found out how to solve the equations for my art, here is a little more clear version so that you can see the numbers and so on!]

Equations for your lines (TASK \#4):


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[In this section, you should write the equations for each of your lines and show any necessary work.]

the last
equation there is $y=6 / 4+-12$

Now here is my desmos I know it really does not look like the final product but I lille some aspects of it
[TASK \#5: Insert an image of your artwork on DESMOS.]


## Reflection

[Write a paragraph that answers the following questions:

1. I honestly do not know if it was kinda hard just to focus on the task and keep track of so many equations and methods in order to do the piece of artwork. But I am proud of myself for what I have done.
2. I only remember the story where we had to do whatever other one I do not remember but I think this one was a little harder because of all that we had to do.
3. I learned that you have to apply yourself in order to figure out what you want to do and need to do and to stick with it.

Only if you worked with a partner... Write 1 paragraph that answers: What did your group learn by doing this benchmark?

