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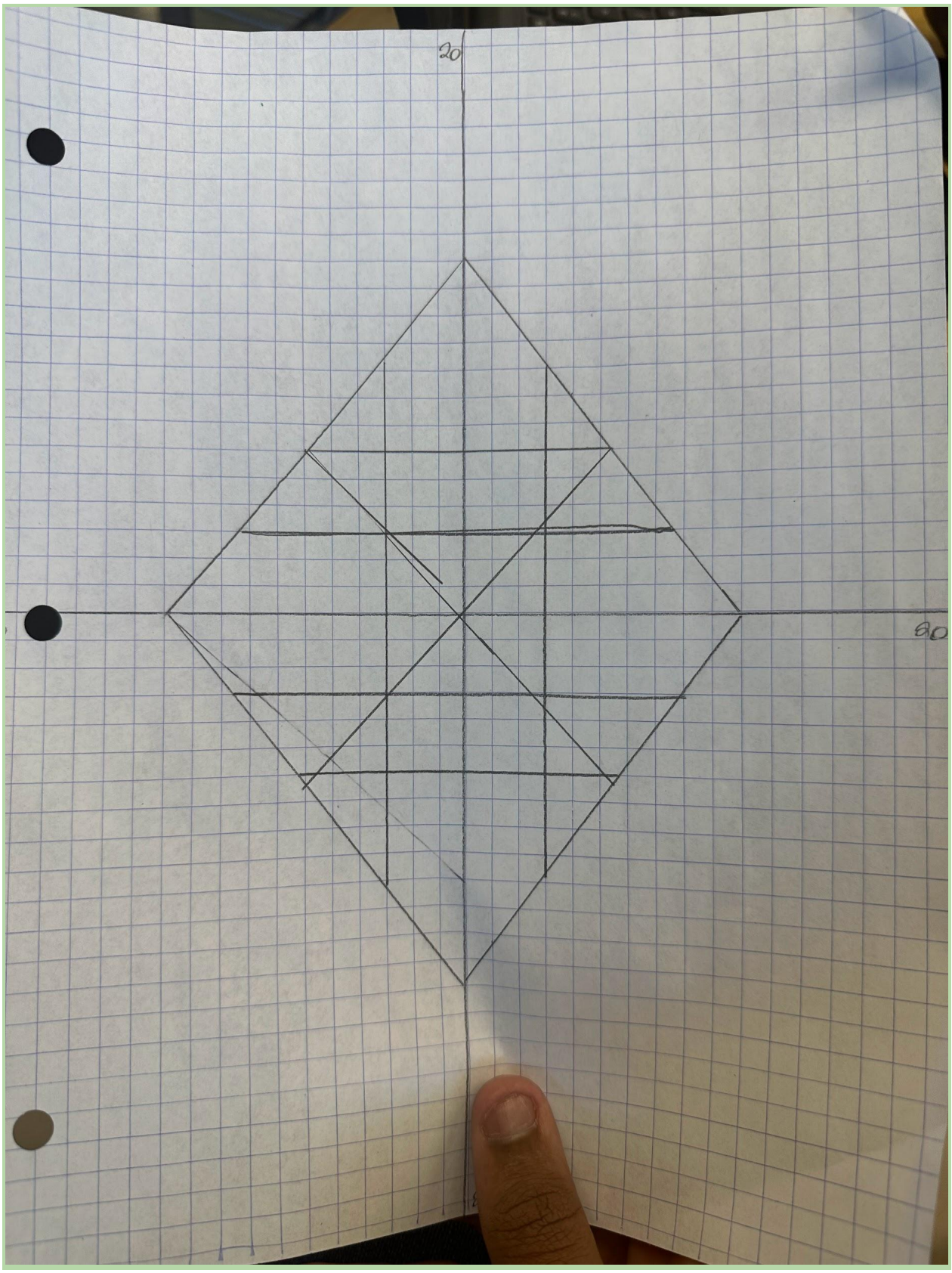
Algebra 1, Quarter 3 Benchmark: Make Your Own Design!

Introduction: Our art work is inspired by a flag that has this as its flag design but it's colored differently.The shape that we made is a large Diamond. We have parallel lines,Perpendicular lines and slopes.



This is our graph design on a piece of graphing paper

Next we will be explaining step by step how to do Slope Intercept Form, Point Slope Form,Horizontal Line,Vertical Line and many more using Slope.

Tutorial on Finding Equations of Lines (TASK #3)

1. **Slope-intercept form**

   [Explain the process for finding the equation of a line in slope-intercept form when given a line on graph paper] We find the slope using Y=mx+b. Everytime there is a line with a slope there is Rise/Run. Rise/Run is the slope intercept and B is the Y intercept of the equation. If itś positive the line will increase and if it's negative it´s decreasing.

   [Explain the process for graphing an equation in slope-intercept form on a coordinate plane] By seeing where it starts. Then seeing where it crosses the y-Intercept. Then you will have the equation y=mx+b.

2. **Point-slope form**

   [Explain the process for finding the equation of a line in point-slope form when given a line on graph paper] You have 4 quadrants. It goes by (.1 pos,pos) to (2. neg,pos), (3. neg,neg), (4. pos,neg). So when it go through the y-intercept it can be neg or pos.

   [Explain the process for graphing an equation in point-slope form on a coordinate plane]

3. **Horizontal Line**

   If there is no Rise then you know it's a horizontal line so the slope for that will be 0 because it´s no rise

   You point your coordinates and then go either to the left or to the right.

4. **Vertical lines**

[Explain the process for finding the equation of a vertical line when given a line on graph paper] the slope would have to be 0 While the y-intercpt would be the number the line is going through.

[Explain the process for graphing a vertical line on a coordinate plane]

It's a straight line going through the y axes. Going from 1-20. Between the numbers is a line going through one of the numbers then thats the y-Intercept

5. **Parallel lines**

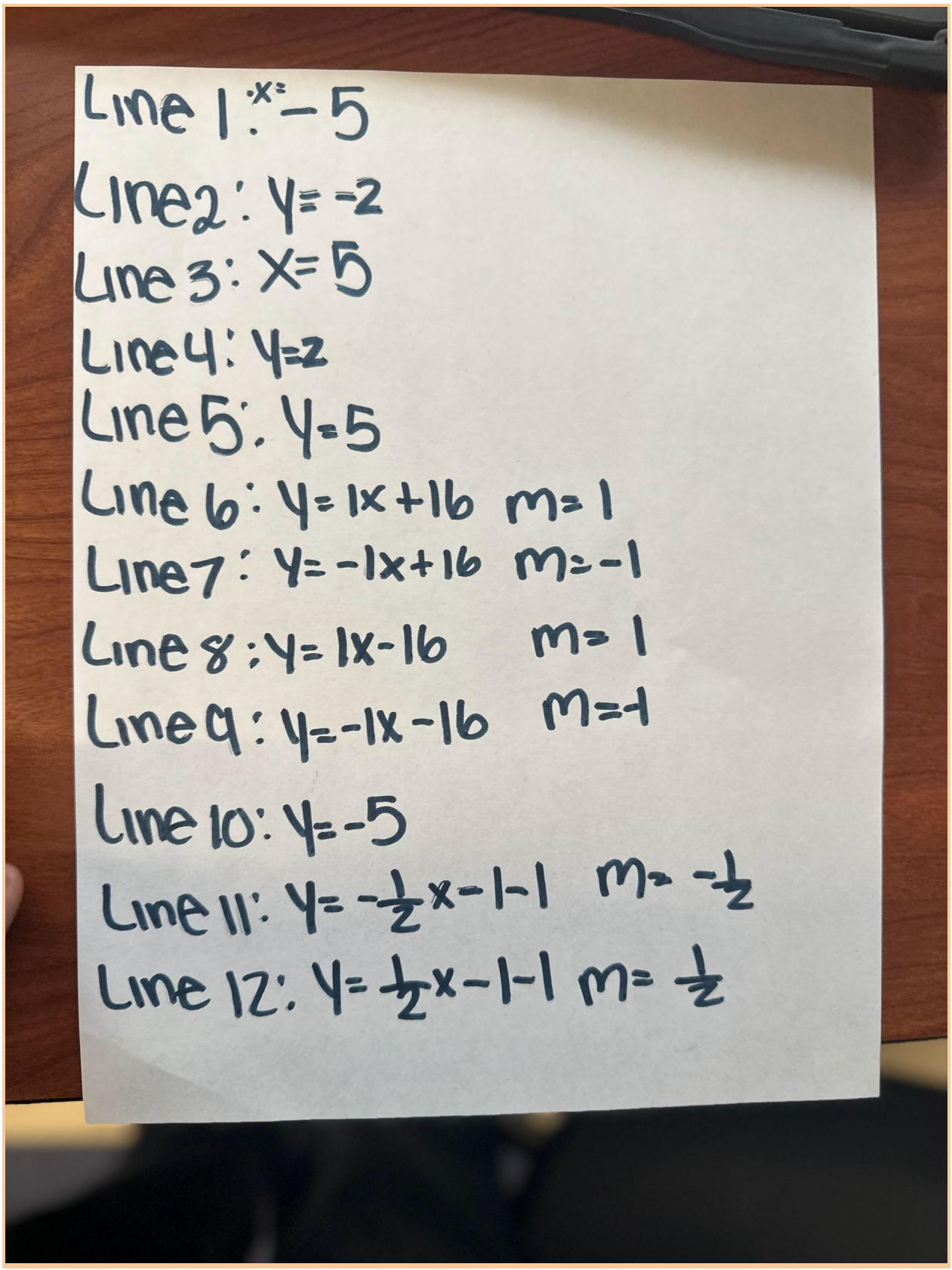
   [Explain the relationship between the slope and y-intercept of parallel lines]

   The slope is where it starts on the x-axes. But y is where the line crosses the y-intercept

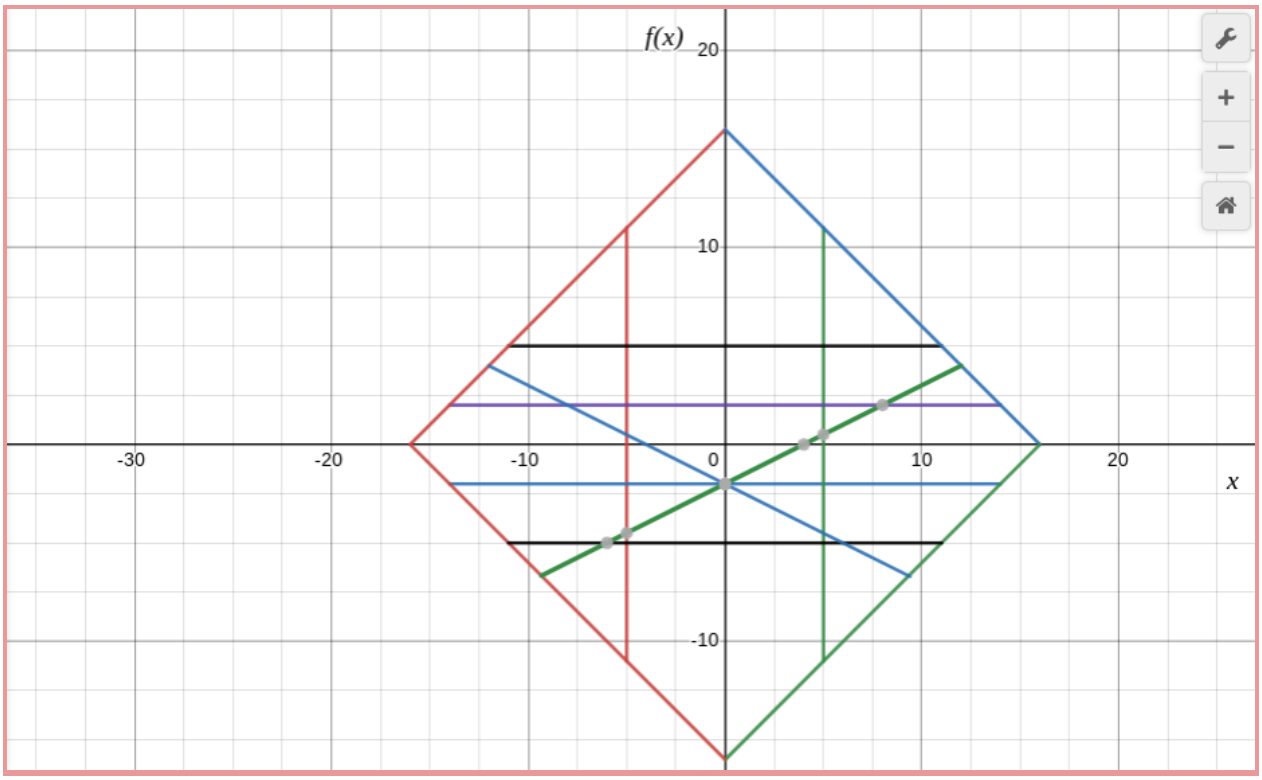
6. **Perpendicular lines**

   Intersect at a 90 degree angles/ The Slope are opposite reciprocal. So that mean whatever the slope is we reverse it. So if the slope is -2 the opposite reciprocal will be 1/2

Next, We have the equations for our lines


Line 1: x = -5
Line 2: y = -2
Line 3: x = 5
Line 4: y = 2
Line 5: y = 5
Line 6: y = 1x + 16 m = 1
Line 7: y = -1x + 16 m = -1
Line 8: y = 1x - 16 m = 1
Line 9: y = -1x - 16 m = -1
Line 10: y = -5
Line 11: y = -1/2 x - 1 - 1 m = -1/2
Line 12: y = 1/2 x - 1 - 1 m = 1/2

Now for our final artwork we have



Reflection

Throughout this whole process me and my partner learned how to work better with each other. We are both really quiet people who don't really talk to other people but we cooperate well with each other. With this benchmark we put a lot of effort into making it perfect and good to show to other people. We learned domains in algebra slope problems when we needed to use a line