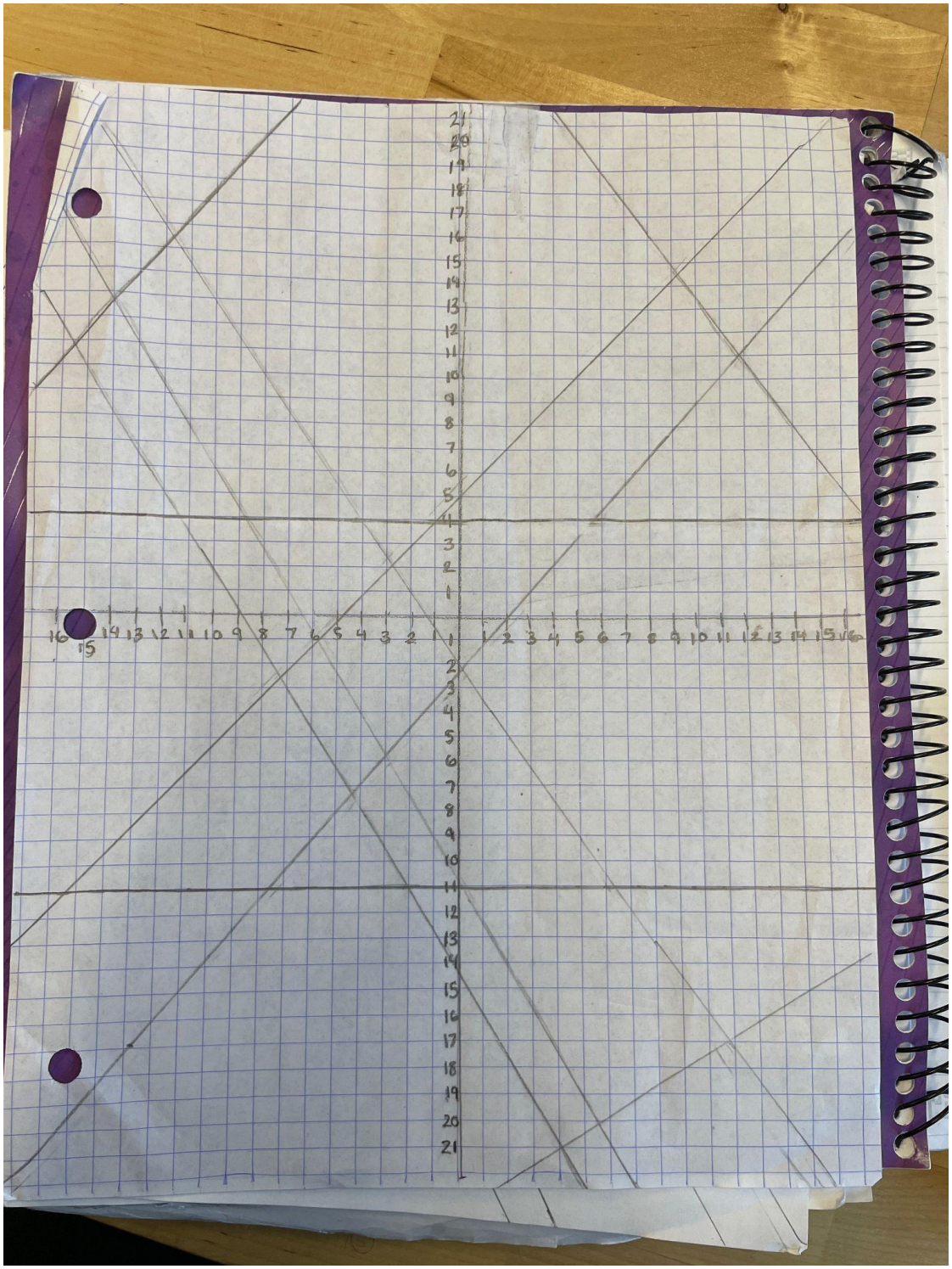
In my benchmark, I just went along and made lines. I love art, and when I do it, I do anything and I see where it takes me. That's how I feel like the best artwork comes from.



I did kinda change it btw.

Task 2.

Slope-intercept form

y=mx+b form

What is the process for graphing an equation in slope-intercept form on a coordinate plane?

Find the y-intercept = (b), plot it, then find the slope = (m), use rise over run from the slope, and lastly connect the two points.

What's the process for graphing an equation in point-slope form on a coordinate plane?

First, you will have to take out the known slope and also point from the equation which is y-y1=m(x-x1). Then the slope and known point would be (x1, y1). Then plot the point and use the slope to find the way the line increases.

What is the process for finding the equation of a horizontal line when given a line on graph paper?

Horizontal lines will always have a slope of 0. In y=mx+b, the slope (m) is 0. Then the equation is y=b. Because the b is now the y-coordinate of the y-intercept.

What is the process for graphing a horizontal line on a coordinate plane?

Like I said before, they will always have the slope of 0. The place where the x and y meet is the origin.

Can you explain the process for finding the equation of a vertical line when given a line on graph paper?

Usually, the line is parallel to the y-axis which is x= a. Also the slope is usually undefined/(0) and or it's infinity.

The process for graphing a vertical line on a coordinate plane:

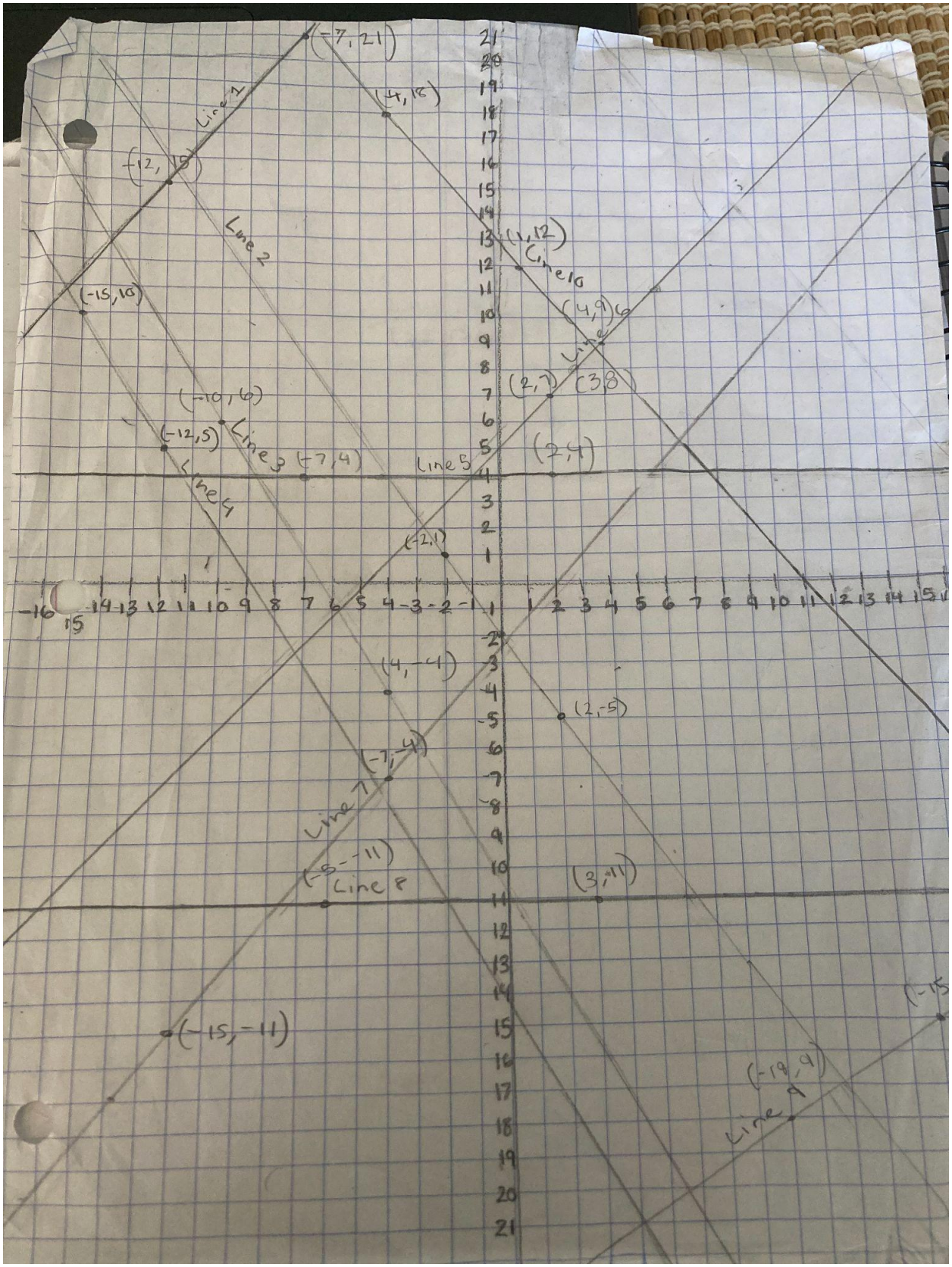
It is basically a straight line that goes bottom to top or top to bottom. It has to have the same x-coordinate value.

What's the differences between the slope and y-intercept of parallel lines?

They have to have the same slope but different y-intercepts.

Differences between the slope and y-intercept of perpendicular lines:

They have to have opposite-reciprocal slopes.


(-7, 21)
(-4, 18)
Line 1
(-12, 15)
Line 2
(-15, 10)
(1, 12)
Line 10
(4, 9)
Line 6
(2, 7)
(3, 8)
(-10, 6)
(-12, 5)
Line 3
(-7, 4)
Line 5
(2, 4)
Line 4
(-2, 1)
(4, -1)
(2, -5)
(-7, -4)
Line 7
(-5, -11)
Line 8
(3, -11)
(-15, -11)
(-19, 9)
Line 9

Line 1

$(-12, 15)\ (-7, 21)$ (x_1, y_1; x_2, y_2)

$m = \frac{21 - 15}{-7 - -12} = \frac{33}{22} = \frac{3}{2}$

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

Line #2

$(-2, 1)\ (2, -5)$

$m = \frac{-5 - 1}{2 - -2} = \frac{-6}{4} = -\frac{3}{2}$

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

Line 3

$(-10, 6)\ (4, -4)$

$\frac{-4 - 6}{4 - -10} = \frac{-10}{14} = -\frac{5}{7}$

$y = -\frac{5}{7}x + 11$

Line 4

$(-15, 10)\ (-12, 5)$

$\frac{5 - 10}{-12 - -15} = \frac{-5}{3} = -\frac{5}{3}$

$y = -\frac{5}{3}x - 14$

Line 5

$(-7, 4)\ (2, 4)$

$\frac{4 - 4}{2 - -7}\ \frac{0}{9}$

$y = 0$

Line 6

$(2, 7)\ (4, 9)$

$\frac{9 - 7}{4 - 2} = \frac{2}{2}$

$y = \frac{2}{2}x + 5$

Line 7

$(-7, -9)(-15, -11)$

$\frac{-11 - -9}{-15 - -7} = \frac{-7}{-8}$

$y = -\frac{7}{8}x - 2$

Line 8

$(-5, -11)\ (3, -11)$

$\frac{-11 - -11}{3 - -5} = \frac{0}{2}$

$y = 0$

Line 9

$(-19, 9)\ (-15, 14)$

$\frac{14 - 9}{-15 - -19} = \frac{5}{4}$

$y = \frac{5}{4}x + \frac{131}{4}$

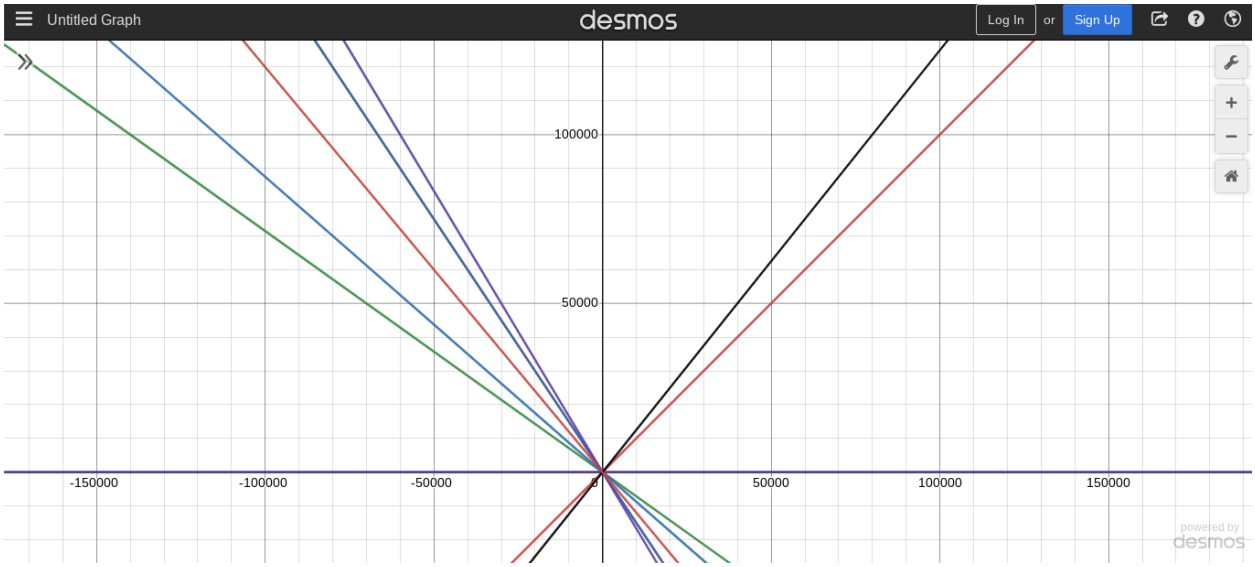
Line 10

$(-4, 18)\ (1, 12)$

$\frac{12 - 18}{1 - -4} = -\frac{6}{5}$

$y = -\frac{6}{5} + 13$

Here is my desmos version



Out of this project, I feel like I did the lines well. I liked that this was kind of an art project and I'm a person who really likes art so I was excited to do it. I do feel like this benchmark I did better on than the other one from last quarter. I learned more and was mostly on time for it. I wouldn’t say it's easy, but I will say that it's more fun and interesting than Q1’s benchmark. It made me learn more about slope and y-intercepts and I kind of like this subject now more than before.