

Neamani, Simpson

**Teacher's Name:** Ms. Gasser

**Algebra 1, \_\_\_c\_\_\_ Band**

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

**Introduction: For this project I will be graphing linear equation and stating the equation to the lines**

-(-7)

## Task 4 # Equation of Lines

**line 1**  
 $(-5, -6)$   $(11, 4)$   $y_2 - y_1$   $x_2 - x_1$   $c_1 = m \cdot x + b$   $(y = -15)$   
 $m = \frac{-6 - 4}{-5 - 11} = \frac{-10}{-16} = 1.25$   
 $y = 1.25x + 0.25$

**line 2**  
 $(4, 2)$   $(5, 9)$   
 $m = \frac{2 - 9}{4 - 5} = \frac{-7}{-1} = 7$   
 $y = 7x + 5$

**line 3**  
 $(8, 8)$   $(3, -1)$   
 $m = \frac{8 - (-1)}{8 - 3} = \frac{9}{5} = 1.8$   $y = 1.8x - 1$

**line 4**  
 $(x = 3)$

**line 5**  
 $(-11, -20)$   $(-9, -19)$   
 $m = \frac{-20 - (-19)}{-11 - (-9)} = \frac{-1}{-2} = 0.5$   
 $y = 0.5x + 0.5$

**line 6**  
 $(3, -27)$   $(6, -26)$   
 $m = \frac{-27 - (-26)}{3 - 6} = \frac{-1}{-3} = 0.33$   
 $y = 0.33x + 28$

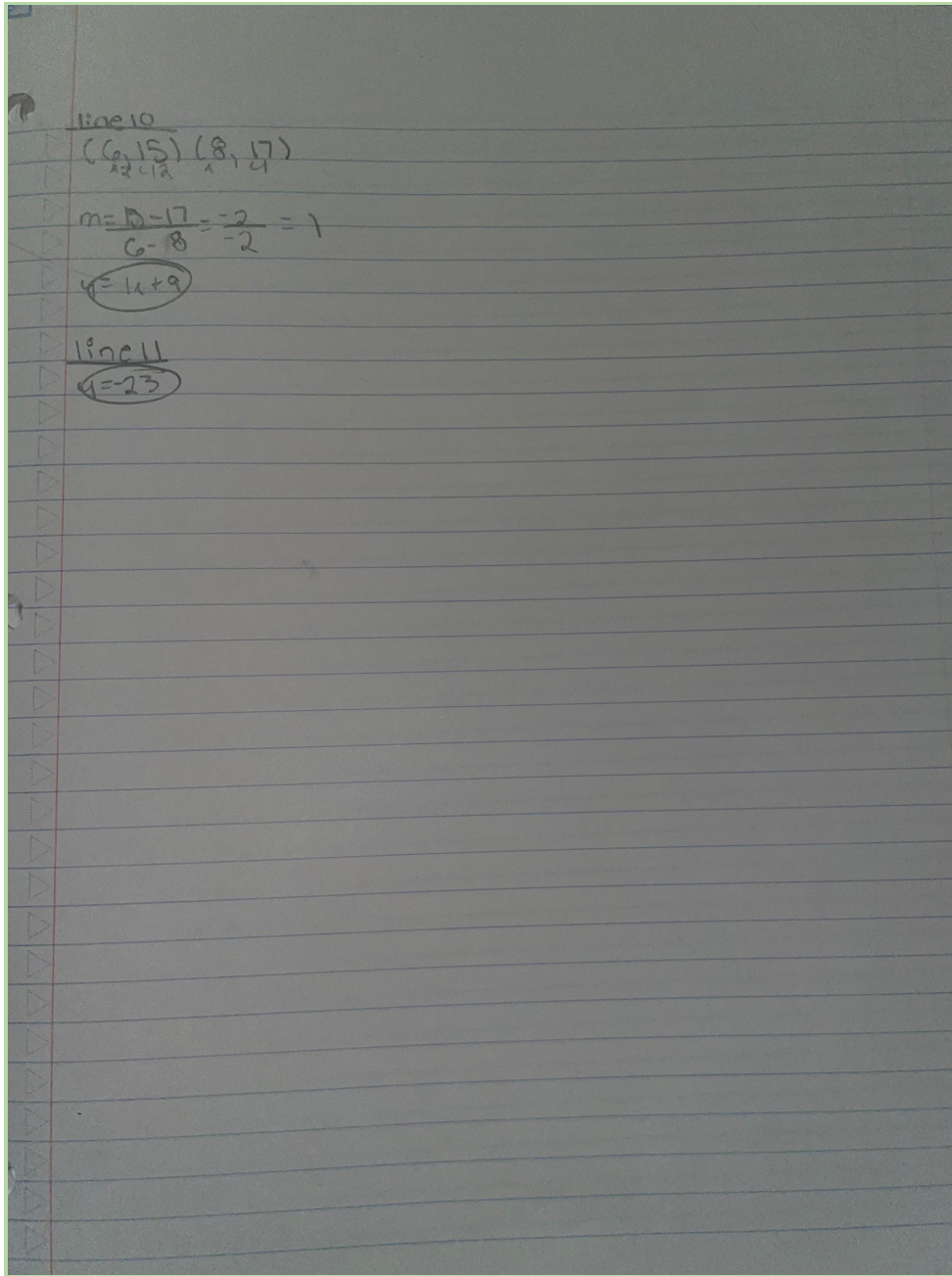
**line 7**  
 $(1, -2)$   $(5, 0)$   
 $m = \frac{-2 - 0}{1 - 5} = \frac{-2}{-4} = 0.5$   
 $y = 0.5x + 5$

**line 8**  
 $(14, -7)$   $(12, -3)$   
 $m = \frac{-7 - (-3)}{14 - 12} = \frac{-4}{2} = -2$   
 $y = -2x + 27$

Neamani, Simpson

Teacher's Name: Ms. Gasser

Algebra 1, \_\_\_c\_\_\_ Band



## Finding Equations of Lines

### 1. Slope-intercept form

To graphing an equation in slope-intercept form on a coordinate plane you would find where the line goes through the y axis and when you see the point you will do rise/ run

Neamani, Simpson

**Teacher's Name:** Ms. Gasser

**Algebra 1, \_\_\_c\_\_\_ Band**

**2. Point-slope form**

[if a line graph is shown and you want to get its equation. You should first find its slope as a sample . the slope is then multiplied through and added to both sides ]

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

**3. Horizontal lines**

[to find a horizontal line equation you look where the line crosses the y axis and then you would just put  $y = ?$  whatever it is (number wise) for graphing the horizontal line you look where the line crosses the y axis

**4. Vertical lines**

For vertical line you really dont do nothin you just find y or x but for vertical you're always find x no matter what ]

For graphing a vertical line you will just be looking where the line crosses the x axis and that would be your answer  $x = ?$

**5. Parallel lines**

The relationship between them is that they are always equal no matter what

**6. Perpendicular lines**

the relationship between the slope and y-intercept of perpendicular lines is that they are the same equation but the number are just mixed up in some type of way

**Next is....**

**Equations of lines**

Neamani, Simpson

Teacher's Name: Ms. Gasser

Algebra 1, \_\_\_c\_\_\_ Band

$$y=1.25x+0.25$$

$$y=1.2x+3$$

$$y=-0.8x-1$$

$$y=-0.5x+0.5$$

$$y=0.3x-28$$

$$y=-1x+5$$

$$y=-2x+27$$

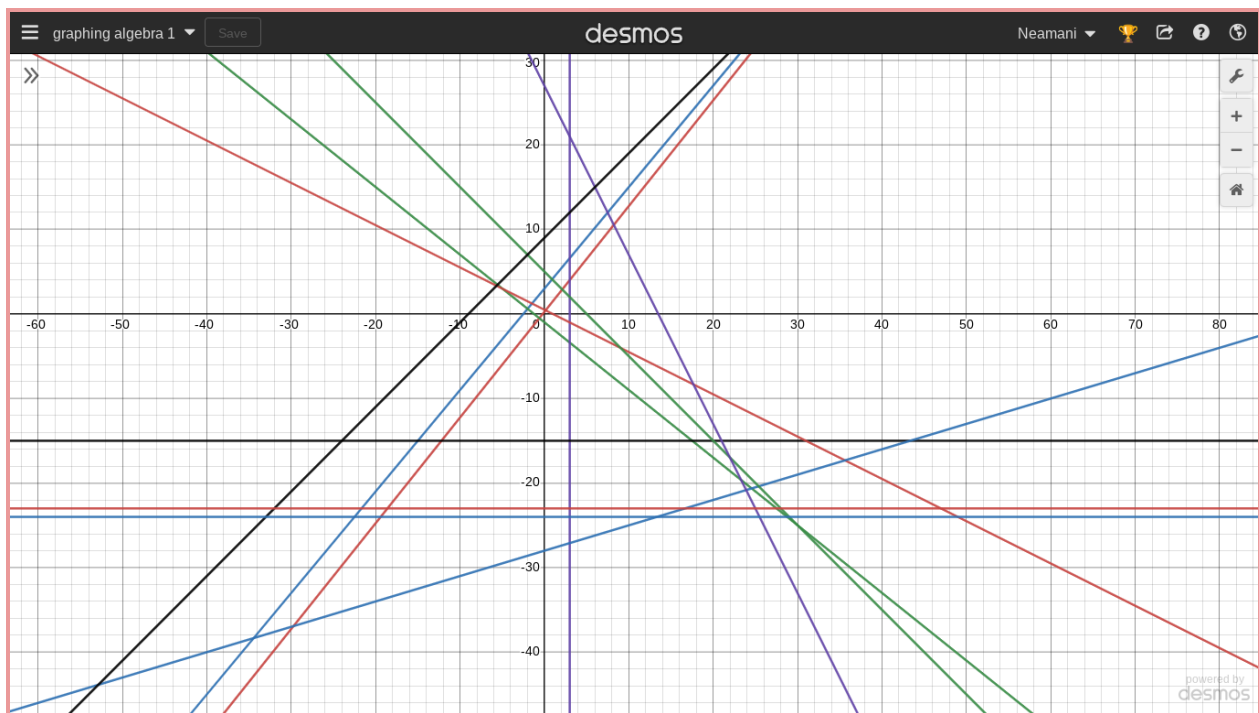
$$y=1x+9$$

$$[y=-15]$$

$$[y=-23]$$

$$[x=3]$$

**Next is ...**



Neamani, Simpson

**Teacher's Name:** Ms. Gasser

**Algebra 1, \_\_\_c\_\_\_ Band**

**Reflection**

Something that I did good throughout this whole process of my benchmark is the graphing part. I improve on this process by staying on top of all my stuff and having a good attitude throughout the process. Something else that I learned is to have a LOT of patience with is benchmark.