My mini tutorial unit 2

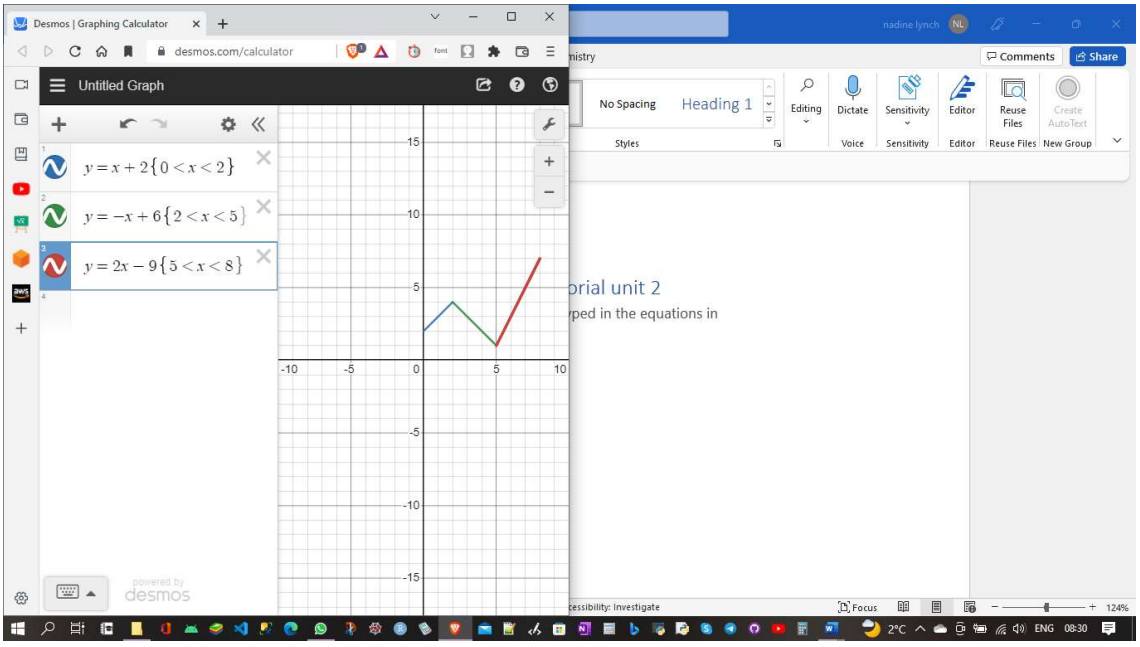
Discussion unit

I first went to www.desmos.com/calculator, the I typed in the equations in (equations are below)

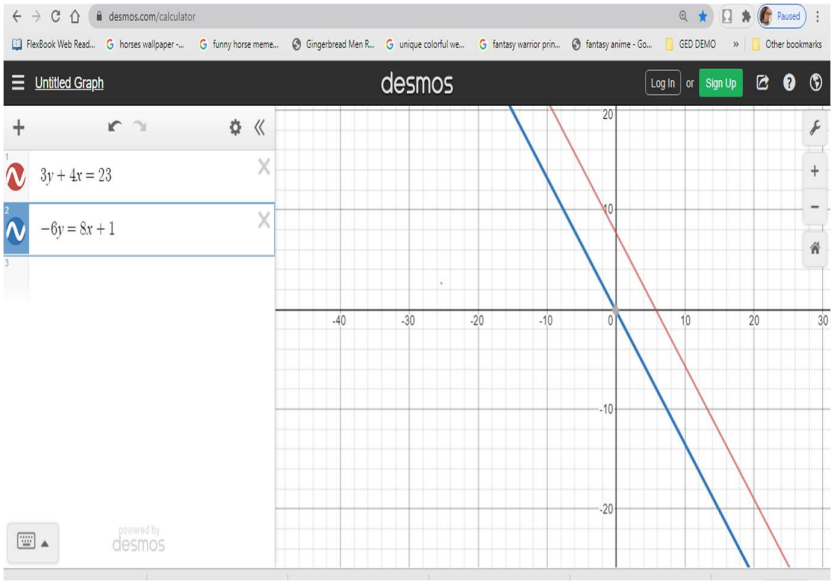
$y = x + 2 \{0 < x < 2\}$

$y = -x + 6 \{2 < x < 5\}$

$y = 2x - 9 \{5 < x < 8\}$



Written unit



$3y + 4x = 23$

$-6y = 8x + 1$

Solution:

y = 4-$\frac{4}{3}x$

-6y =8+1

the straight line is $\frac{8}{-6} = \frac{-4}{3}$

then substitute -6y =8x+1

-6(4-$\frac{4}{3}$)=8x+1

=$x \in \emptyset$

so our solution is :

$(x, y) \in \emptyset$

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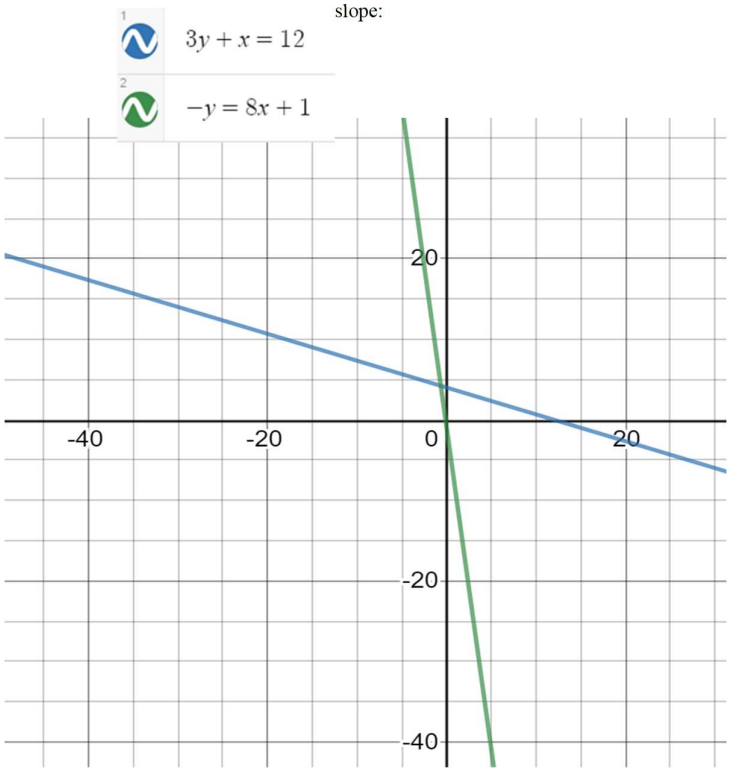
b. $\left\{\begin{array}{l} 3y+x=12 \\ -y=8x+1 \end{array}\right\}$

slope:



Solution:

x =12-3y,

-y = 8x+1

x = 8(12-3y)+1

solve for y

y = $\frac{97}{23}$= $y = \frac{97}{23} \approx 4.2173913043478$

substitute the given value of y into the equation -y=8x+1

-$\frac{97}{23}$= 8x+1 = $x = -\frac{15}{23} \approx -0.6521739130435$

solve for x

x = $-\frac{15}{23}$= −0.6521739130435

the possible solution the for the system is the ordered pair (x, y)

so (x, y) = $(-\frac{15}{23}, \frac{97}{23})$

and now check if the given ordered pair is the solution for the system of the equations

$$3x\frac{97}{23}-\frac{15}{23}=12..-\frac{97}{23}=8x-\left(\frac{15}{23}\right)+1$$

now simplify the equalities

12=12

$$\frac{-97}{23}=\frac{-97}{23}$$

solution is

$$(x,y)=\left(\frac{-15}{23},\frac{97}{23}\right)$$