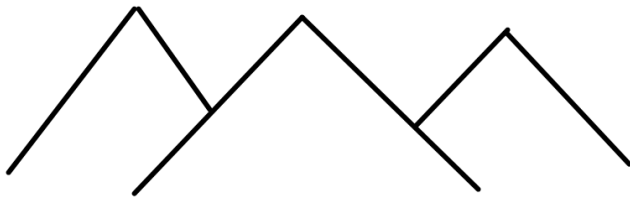


## 5.2 Slope



$$\frac{\text{rise}}{\text{run}}$$

$$\frac{\text{change in } y}{\text{change in } x}$$



$$\frac{\text{vertical change}}{\text{horizontal change}}$$

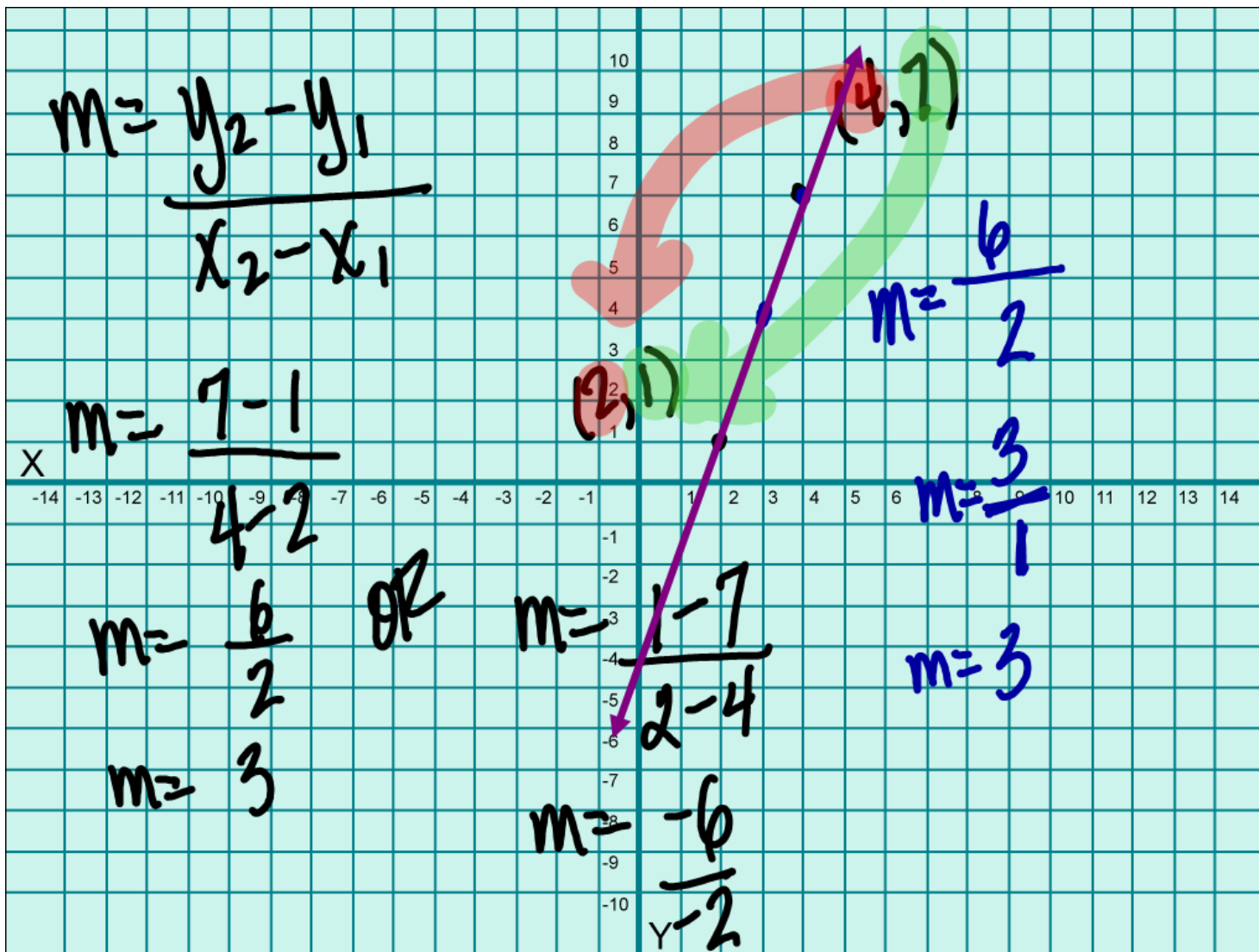
2%

$$\frac{2}{100}$$

$$\frac{\text{difference of } y\text{'s}}{\text{difference of } x\text{'s}}$$

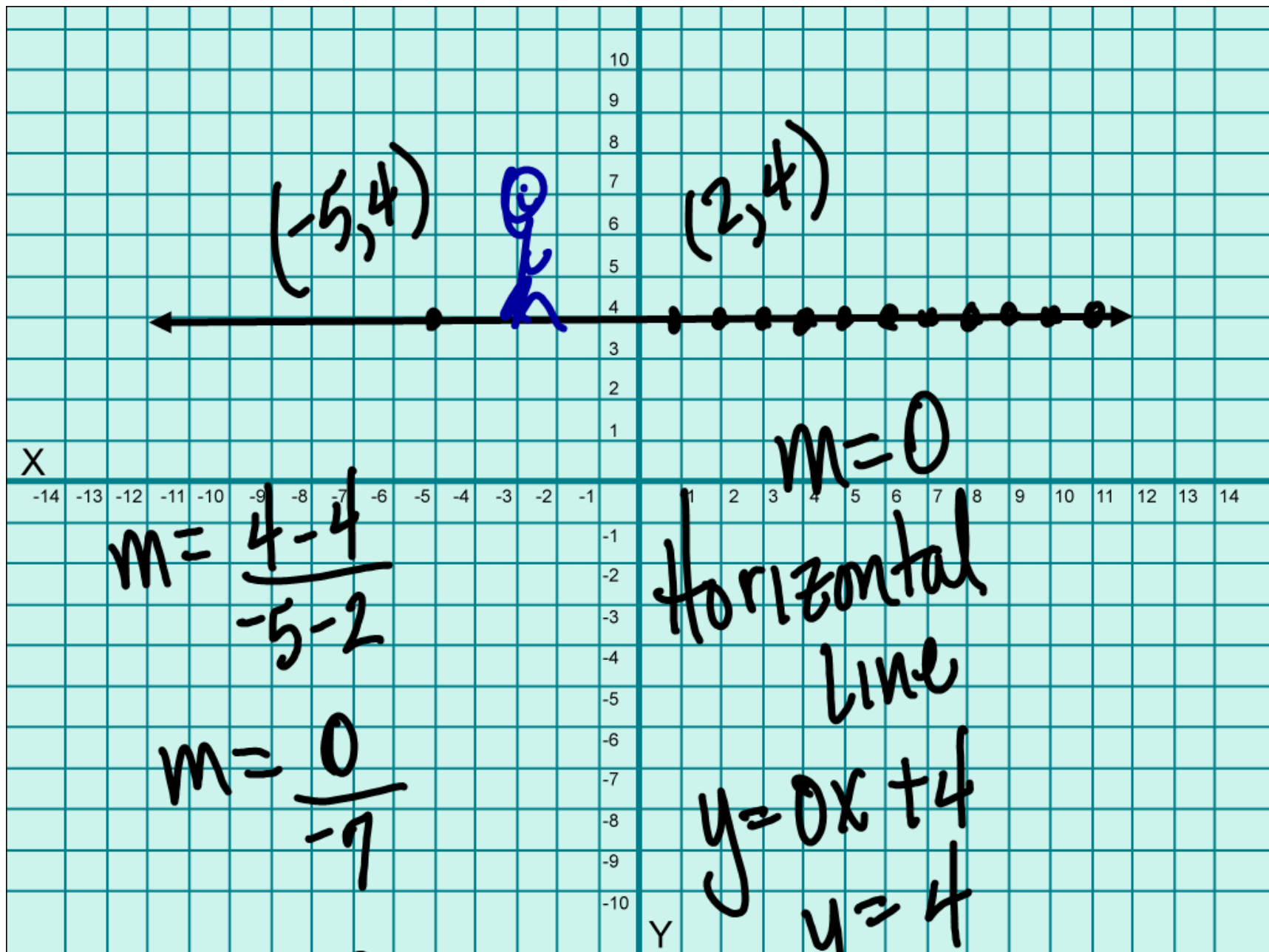
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Point 1  
( $x_1, y_1$ )Point 2  
( $x_2, y_2$ )



$$m = +3$$

positive slope up right



$$m = 0$$

$$m = 0$$

horizontal  
line

$$y = 0x + 4$$

$$y = 4$$

$$m = \frac{4-1}{6-6}$$

$$m = \frac{3}{0}$$

undefined

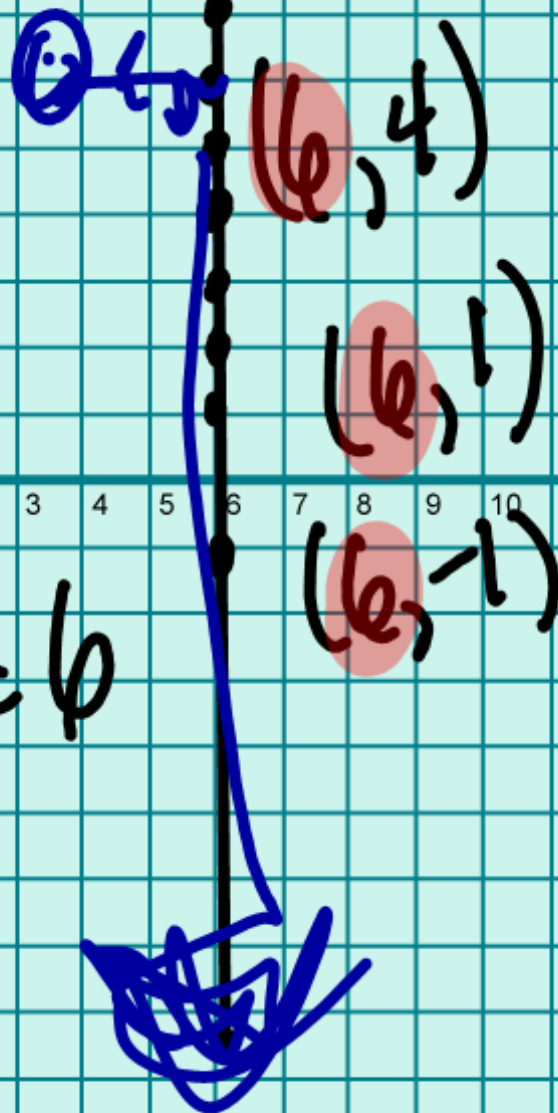
X

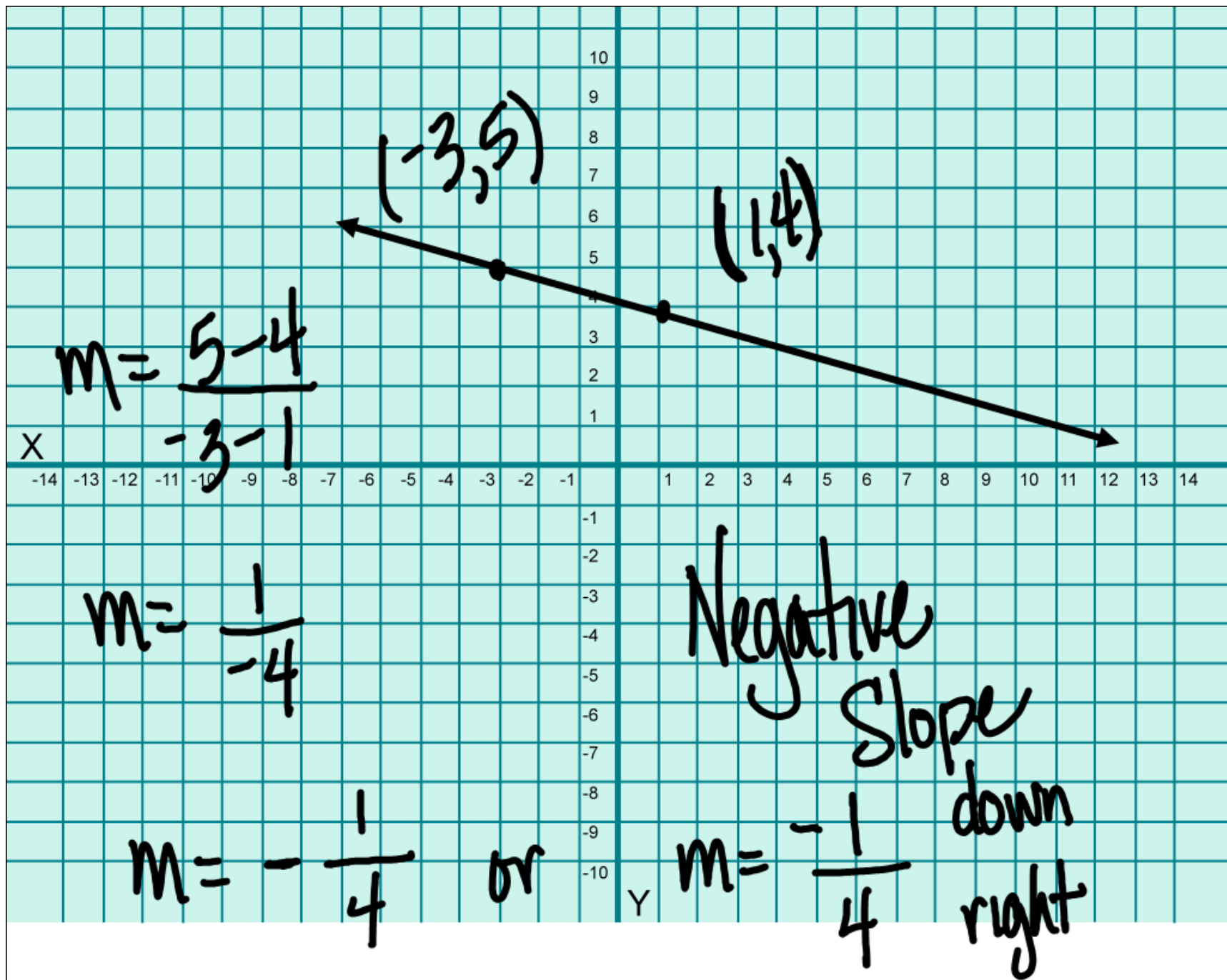
-14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 1 2 3 4 5 6 7 8 9 10 11 12 13 14

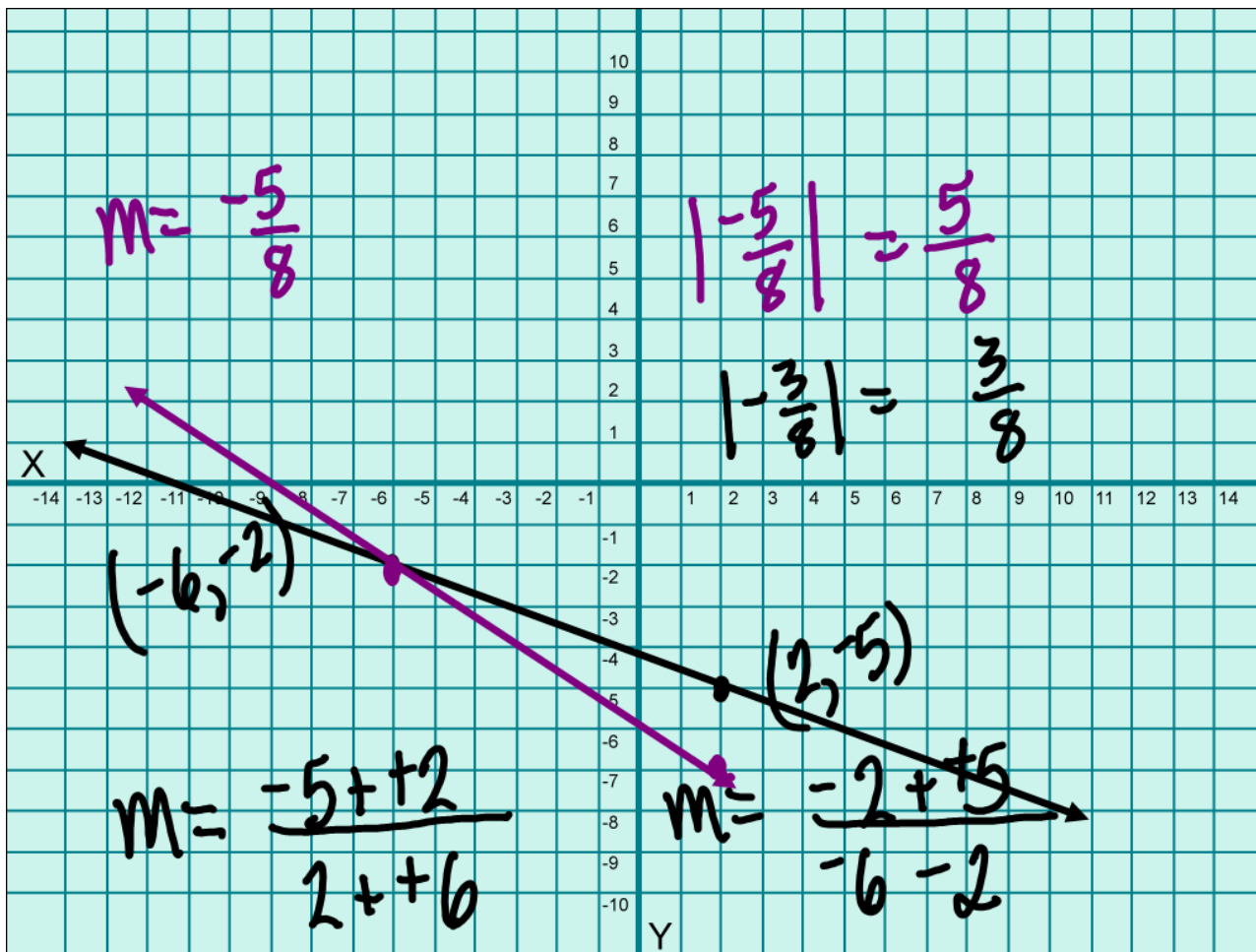
10  
9  
8  
7  
6  
5  
4  
3  
2  
1  
-1  
-2  
-3  
-4  
-5  
-6  
-7  
-8  
-9  
-10

Y

$$x = 6$$





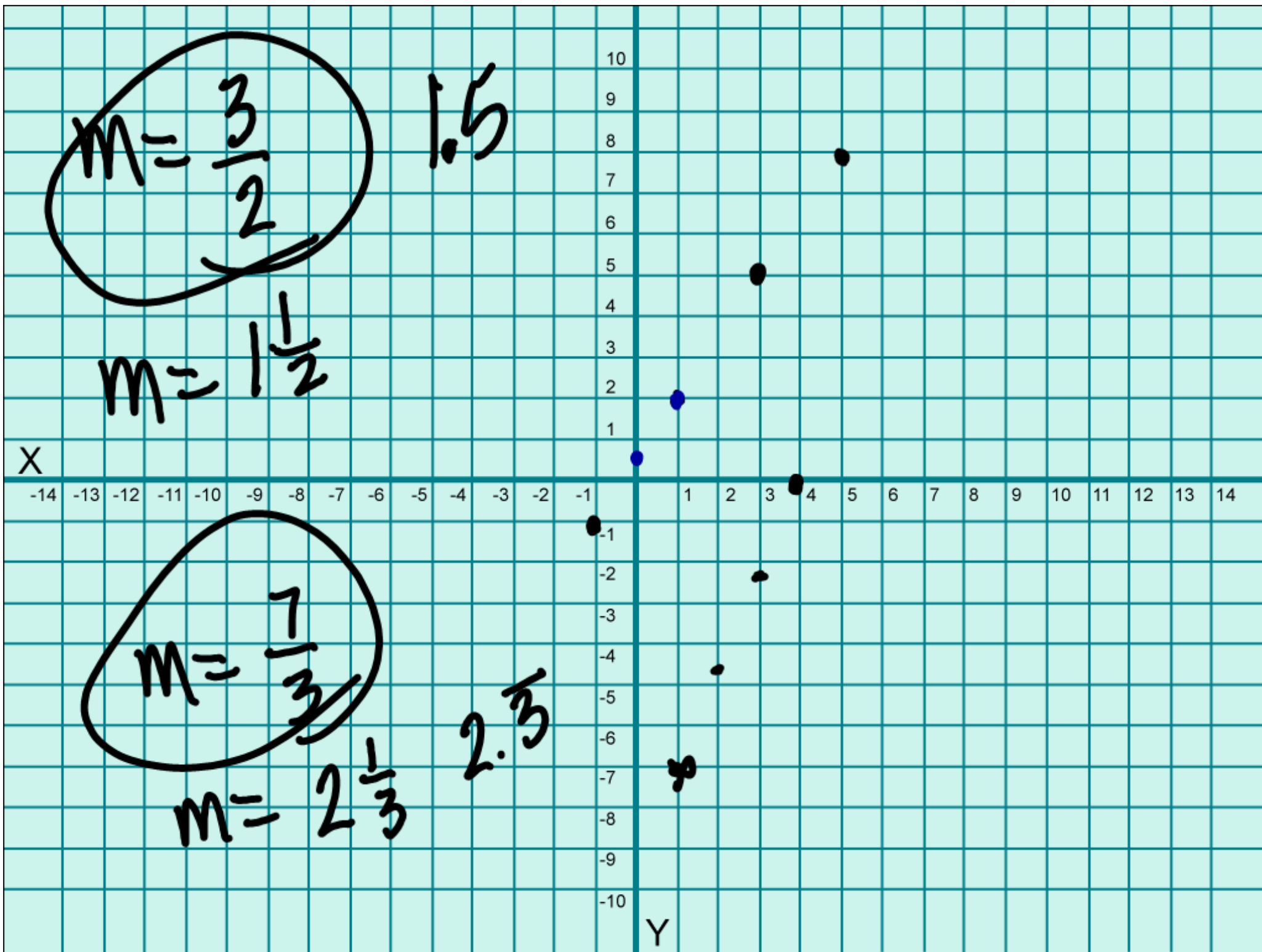


$$m = -\frac{3}{8}$$

$$m = \frac{3}{-8}$$

$$m = -\frac{3}{8}$$

$$m = -\frac{3}{8}$$



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46 1 example