

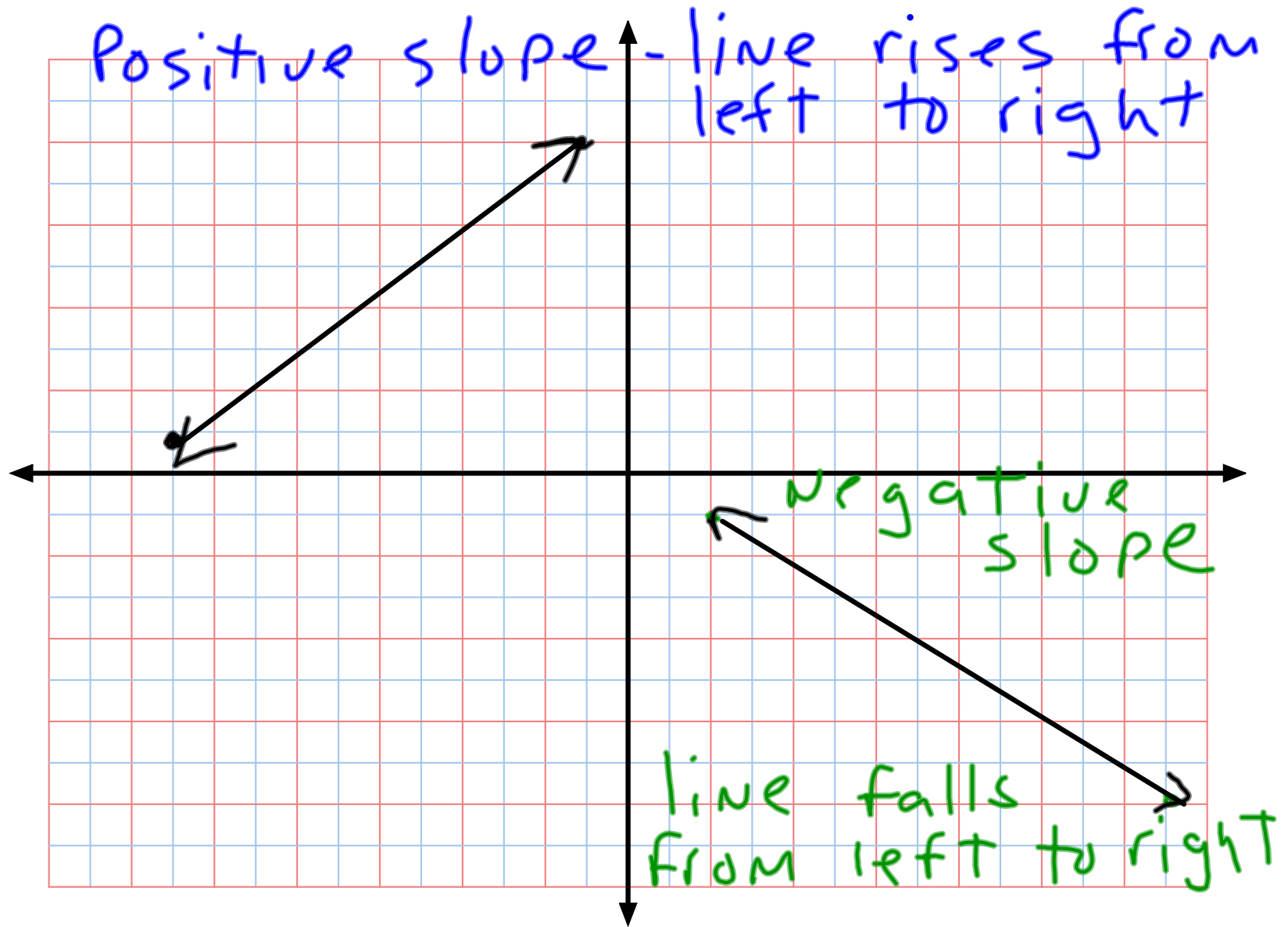
12/6/07 Objective-TSWBAT

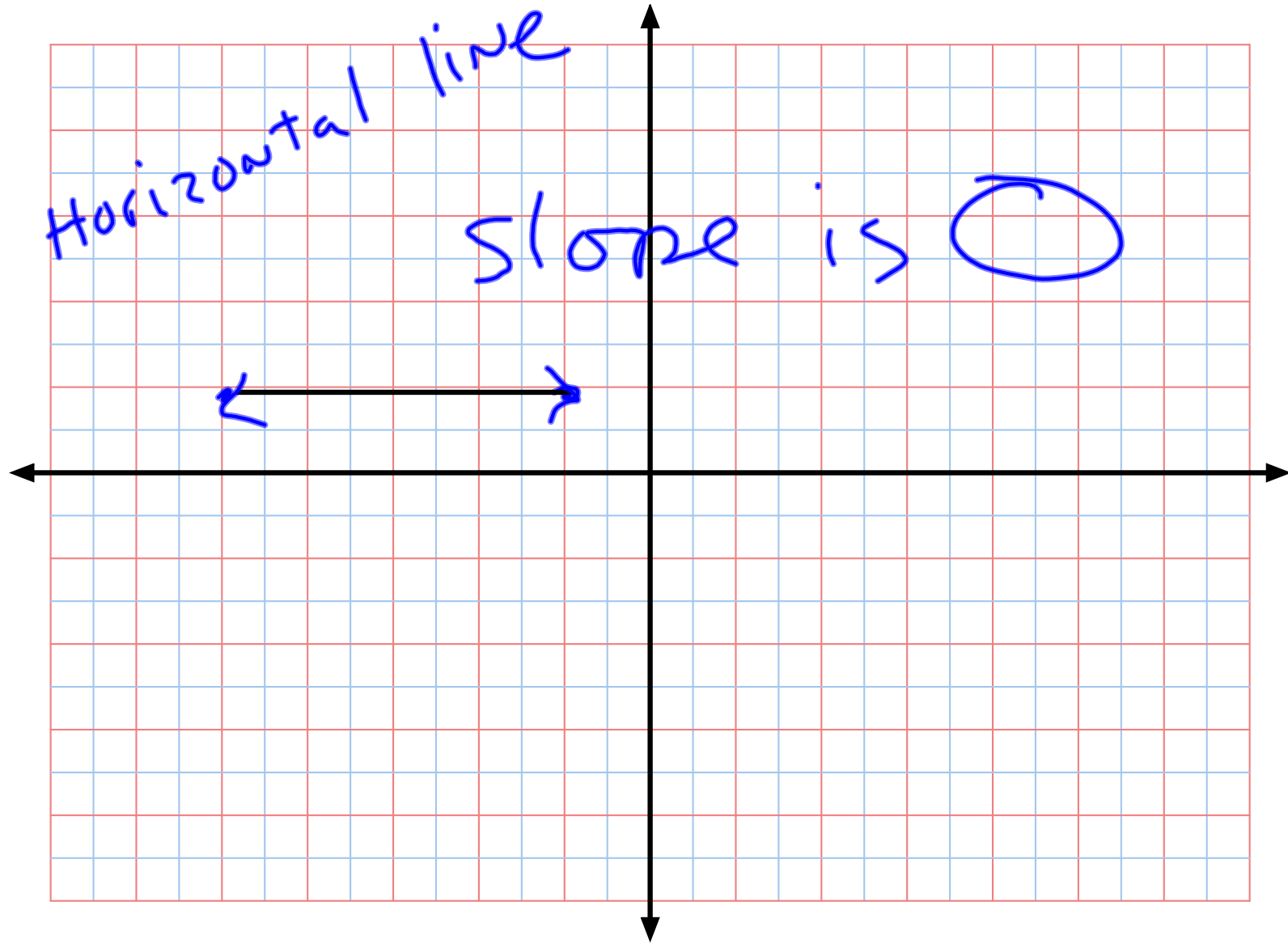
find the slope of a line from
a graph and from a table

Vocabulary

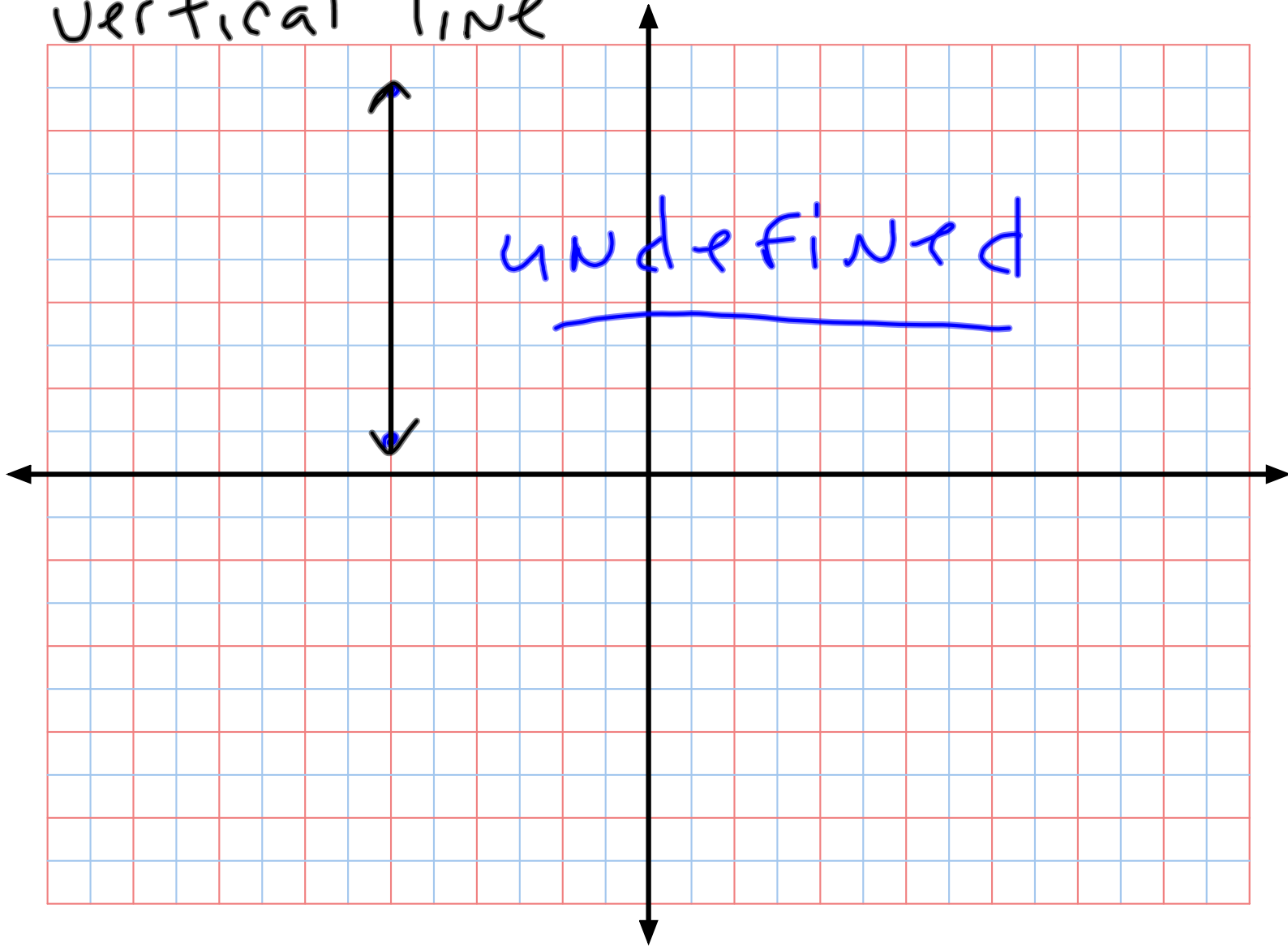
$$\textcircled{1} \text{ slope} = \frac{\text{vertical change}}{\text{horizontal change}} = \frac{\text{rise}}{\text{run}}$$

slope is the steepness of a line





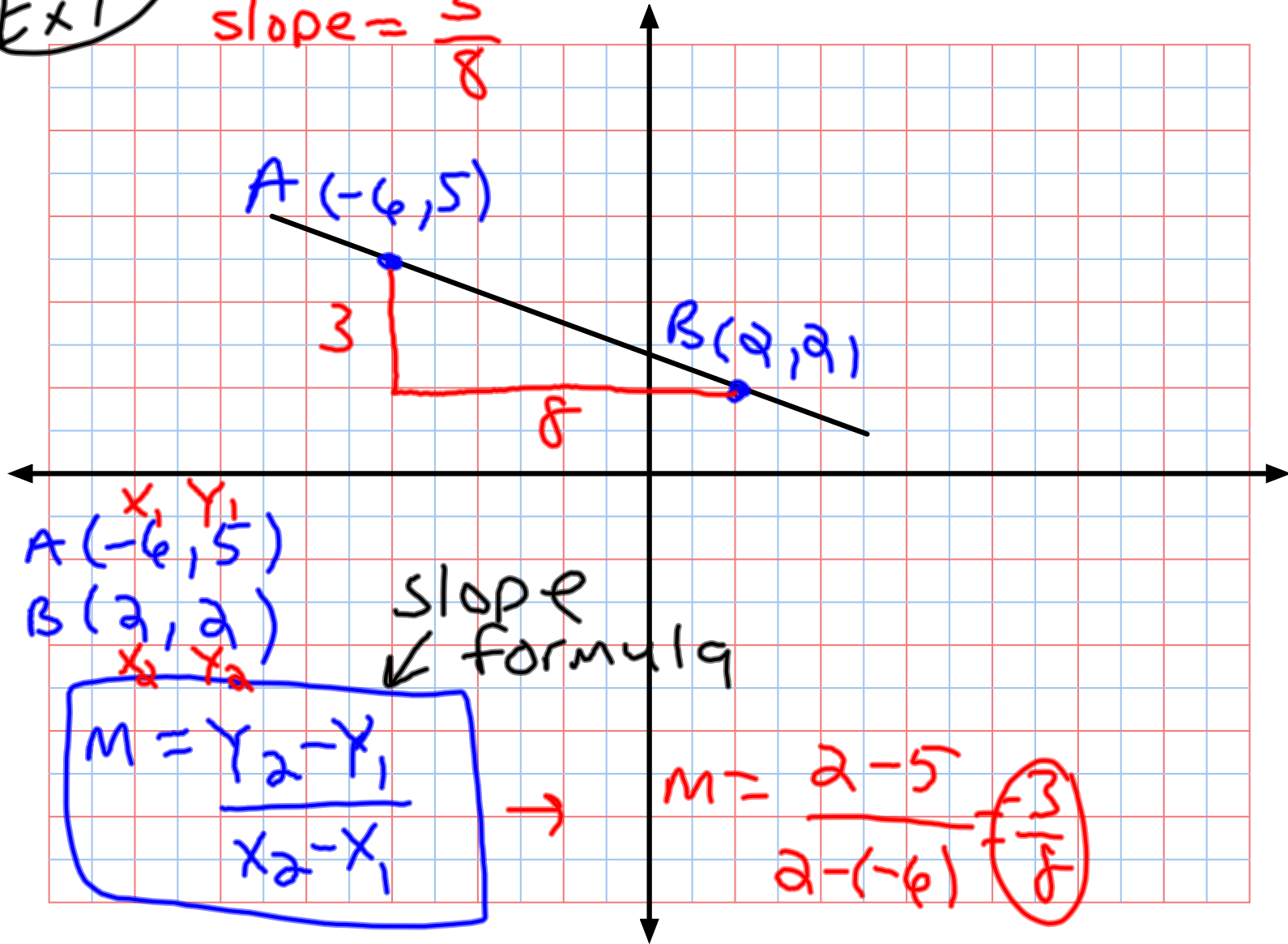
vertical line



undefined

Ex 1

$$\text{slope} = -\frac{3}{8}$$



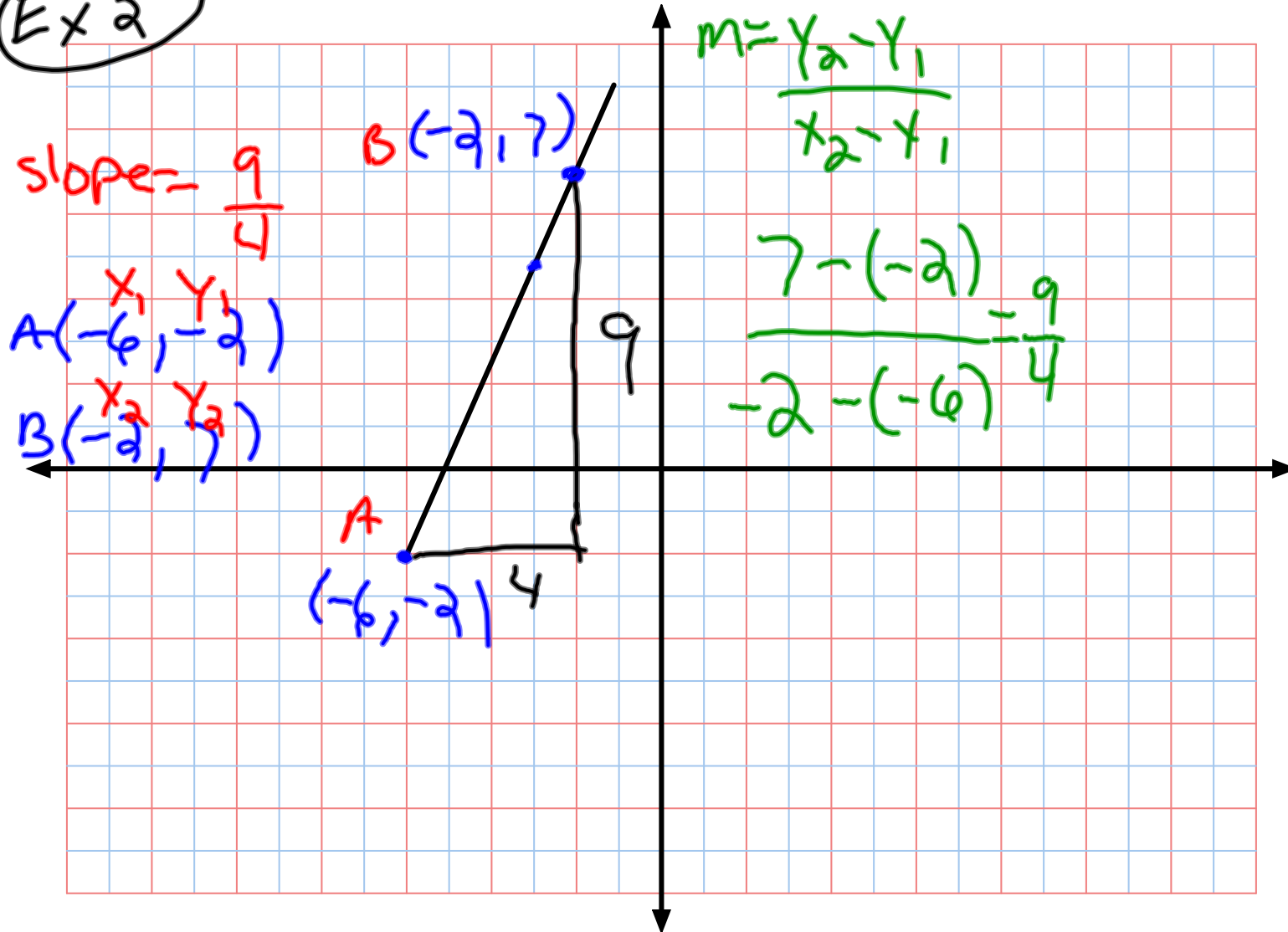
x_1, y_1
A(-6, 5)
 x_2, y_2
B(2, 2)

slope
formula

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

$$m = \frac{2 - 5}{2 - (-6)} = -\frac{3}{8}$$

Ex 2

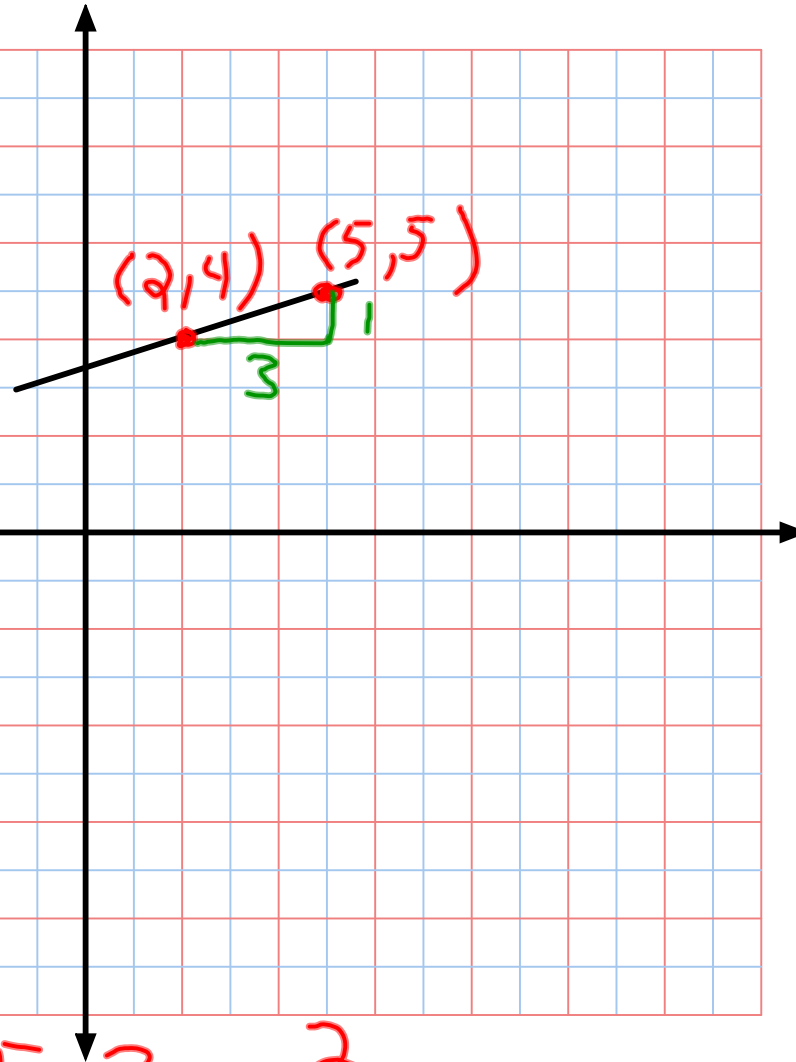


$$\boxed{E_x 3}$$

$$\text{slope} = -\frac{1}{2}$$

$$m = \frac{Y_2 - Y_1}{X_2 - X_1}$$

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



$$\text{slope} = \frac{Y_2 - Y_1}{X_2 - X_1} = \frac{5 - 3}{5 - (-2)} = \frac{2}{7}$$

Finding slope from a table

X	-3	0	3	6
Y	7	5	3	1

Handwritten annotations: Blue arcs above the x-axis connect (-3, 0), (0, 0), (3, 0), and (6, 0) with red '+3' labels. Blue arcs below the y-axis connect (0, 7), (0, 5), (0, 3), and (0, 1) with '-2' labels.

$$\text{slope} = \frac{\text{change in } y}{\text{change in } x} = \frac{-2}{3}$$

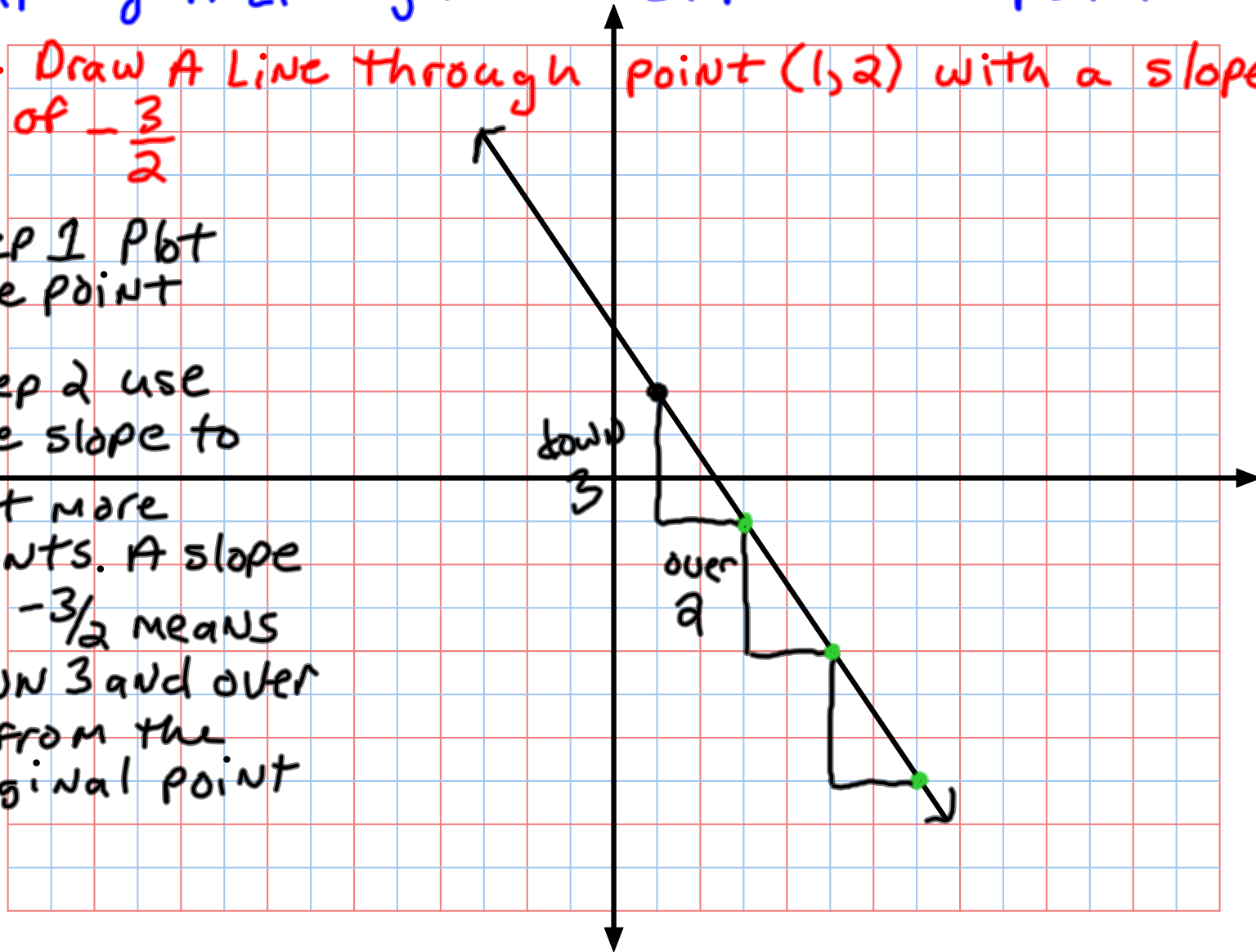
Graphing A Line give its Slope and a point

Ex. Draw A Line through point $(1, 2)$ with a slope of $-\frac{3}{2}$

step 1 Plot the point

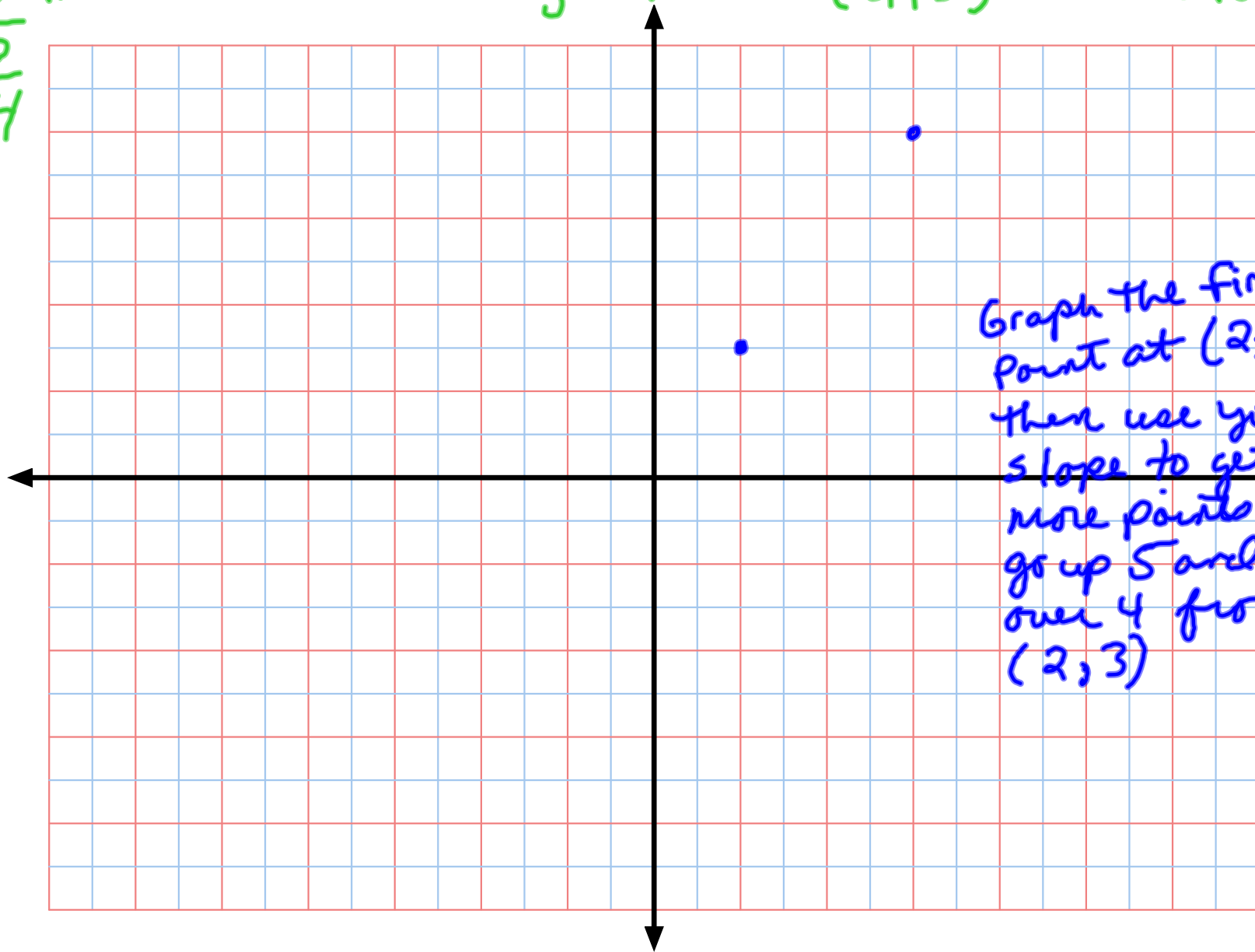
step 2 use the slope to

plot more points. A slope of $-\frac{3}{2}$ means down 3 and over 2 from the original point



Graph the line through point $(2,3)$ with slope

$$\frac{5}{4}$$



Graph the first point at $(2,3)$ then use your slope to get more points go up 5 and over 4 from $(2,3)$

X	-1	0	1	2
Y	2	0	-2	-4

$+1$ (arc from -1 to 0)
 $+1$ (arc from 0 to 1)
 $+1$ (arc from 1 to 2)
 -2 (arc under 2, 0, -2, -4)

$$m = \frac{-2}{1}$$

X	-2	0	2	4
Y	-3	-2	-1	0

$+2$ (arc from -2 to 0)
 $+2$ (arc from 0 to 2)
 $+2$ (arc from 2 to 4)
 $+1$ (arc under -3, -2, -1, 0)

$$m = \frac{1}{2}$$