

Course: Grade 10 Mathematics

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MATH@TD

Feb 1/17

Unit 1: Systems of Linear Equations

Review of the Key Terms:

Cartesian Plane:

A grid with an x and y axis

Coordinates: Point on the Cartesian plane.

Ex. Plot the points A (3,4) and B (-3,-2)

Y - Intercept: where a line crosses the y axis.

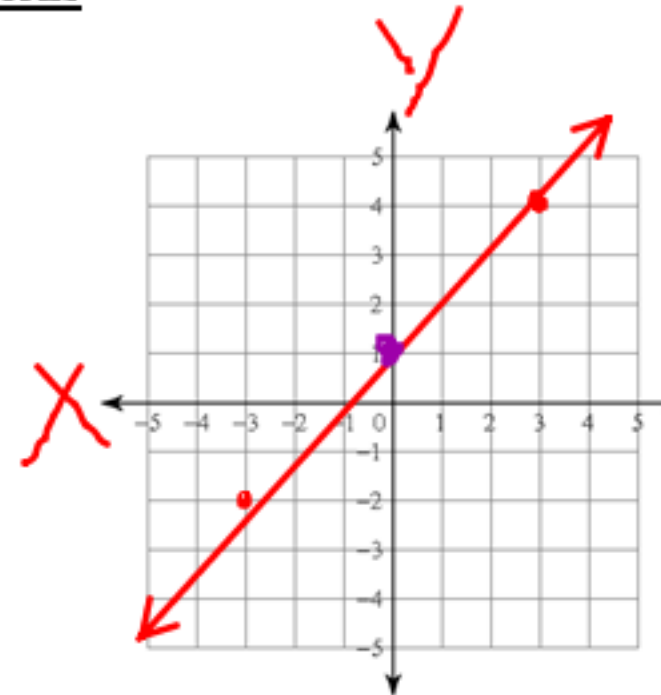


Table of Values:

$y = 2x$

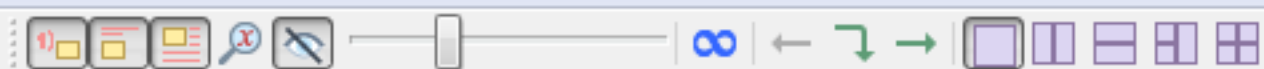
x	y
-2	$2(-2) = -4$
-1	$2(-1) = -2$
0	$2(0) = 0$
1	$2(1) = 2$
2	$2(2) = 4$

Slope:

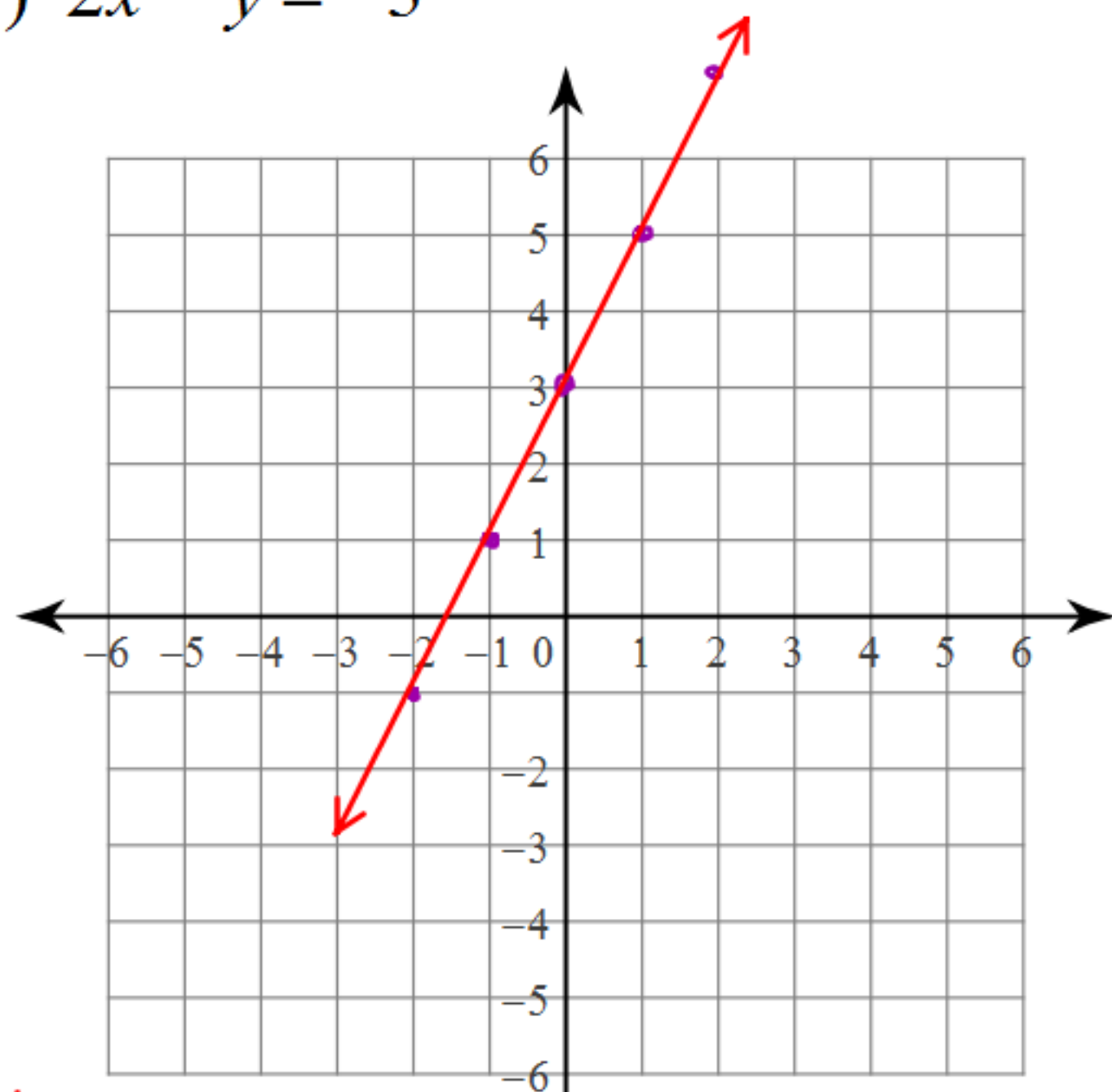
Slope Formula:

Ex. What is the **slope** of a line that passes through (-2,5) and (-6, 2)

y-intercept = (0,1)



5) $2x - y = -3$



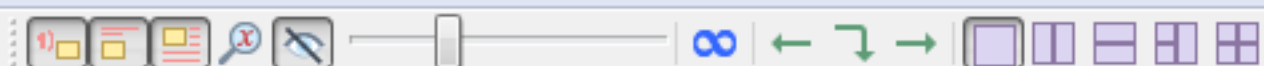
~~$2x - y = -3$~~ $-2x$

$+y = -2x - 3$

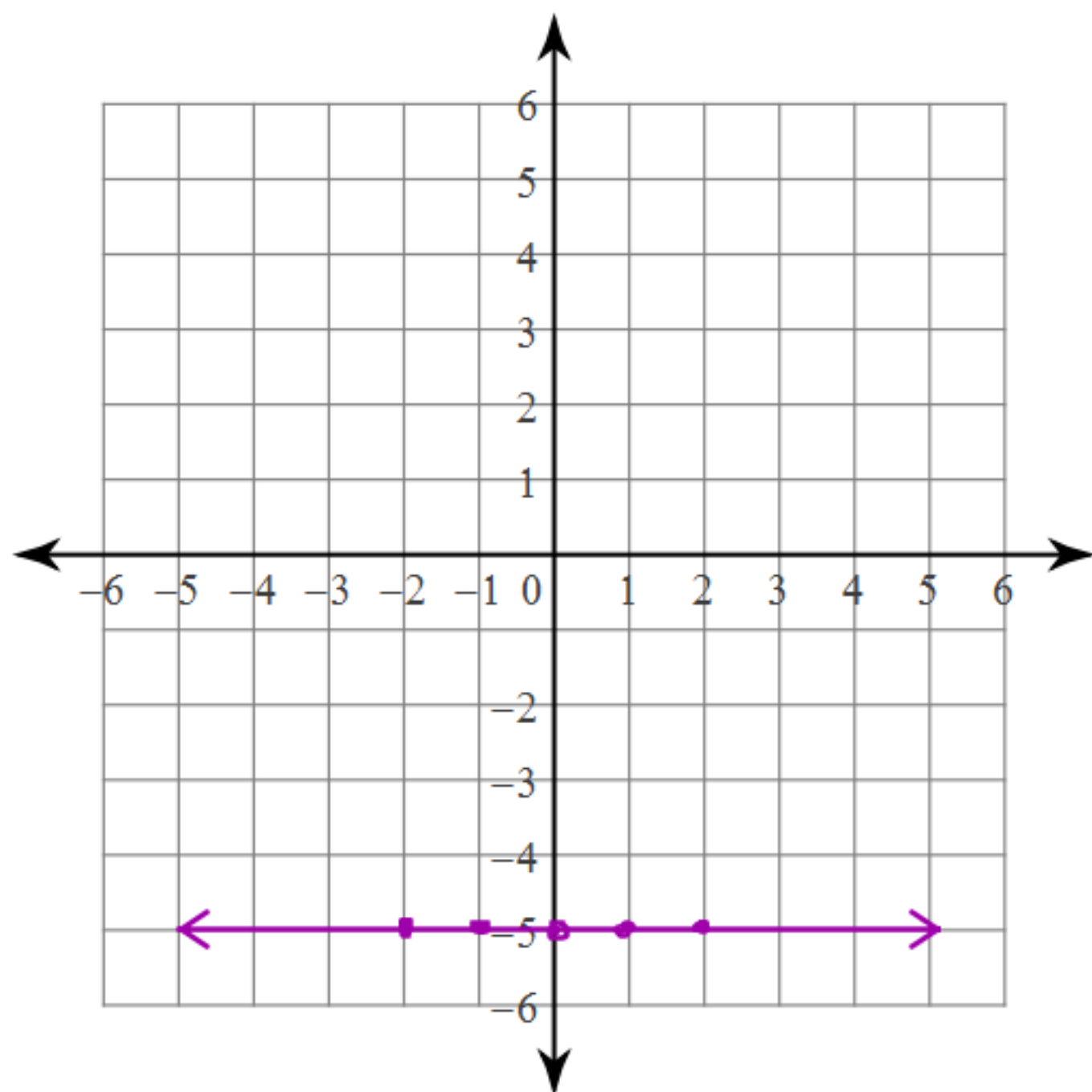
$y = 2x + 3$

X	Y
-2	$2(-2) + 3 = -1$
-1	$2(-1) + 3 = 1$
0	$2(0) + 3 = 3$
1	$2(1) + 3 = 5$
2	$2(2) + 3 = 7$

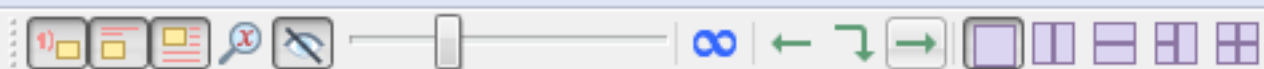
x	y
-2	-1
-1	1
0	3
1	5
2	7



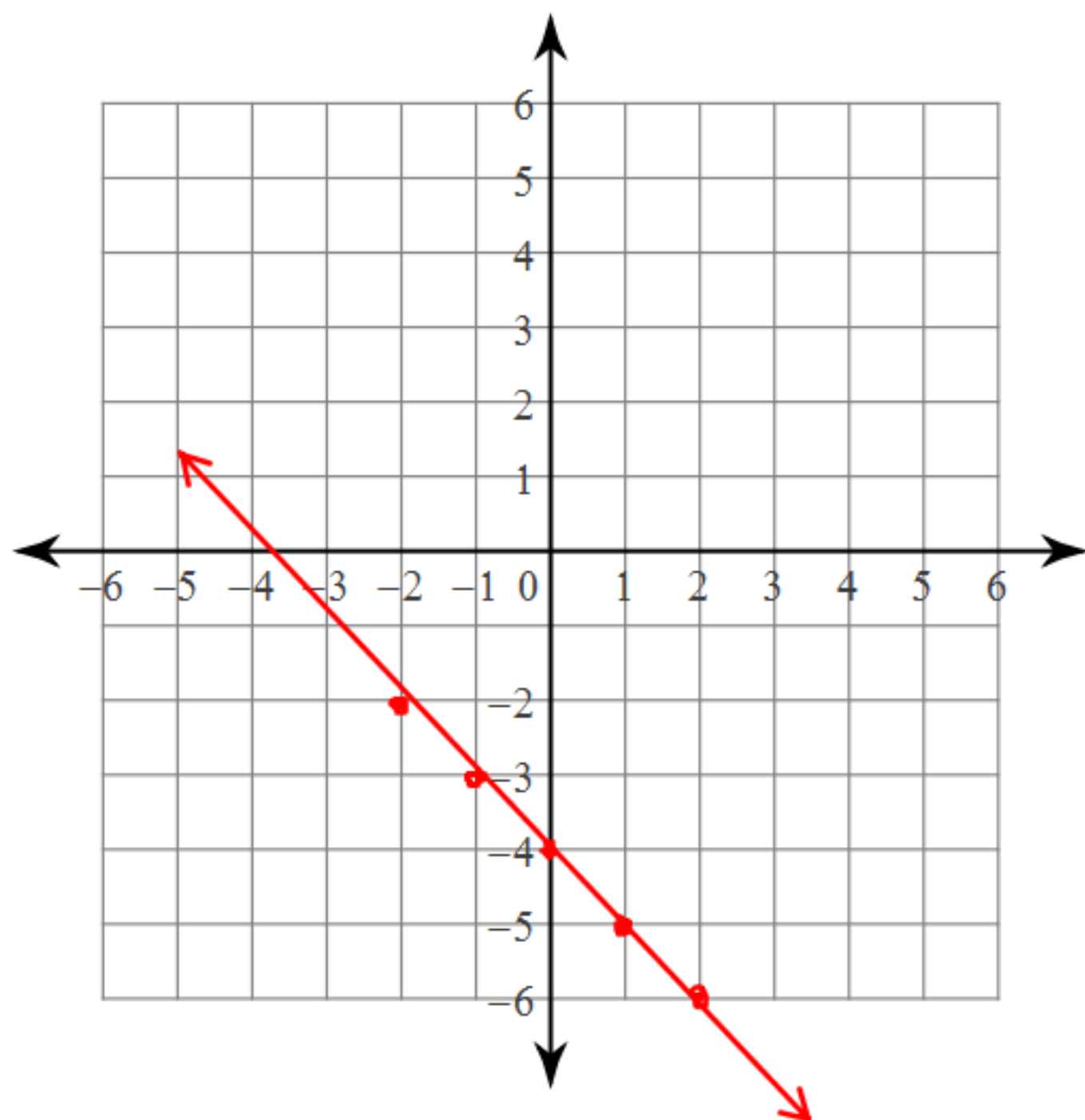
6) $y = -5$



X	Y
-2	-5
-1	-5
0	-5
1	-5
2	-5



7) $x + y = -4$



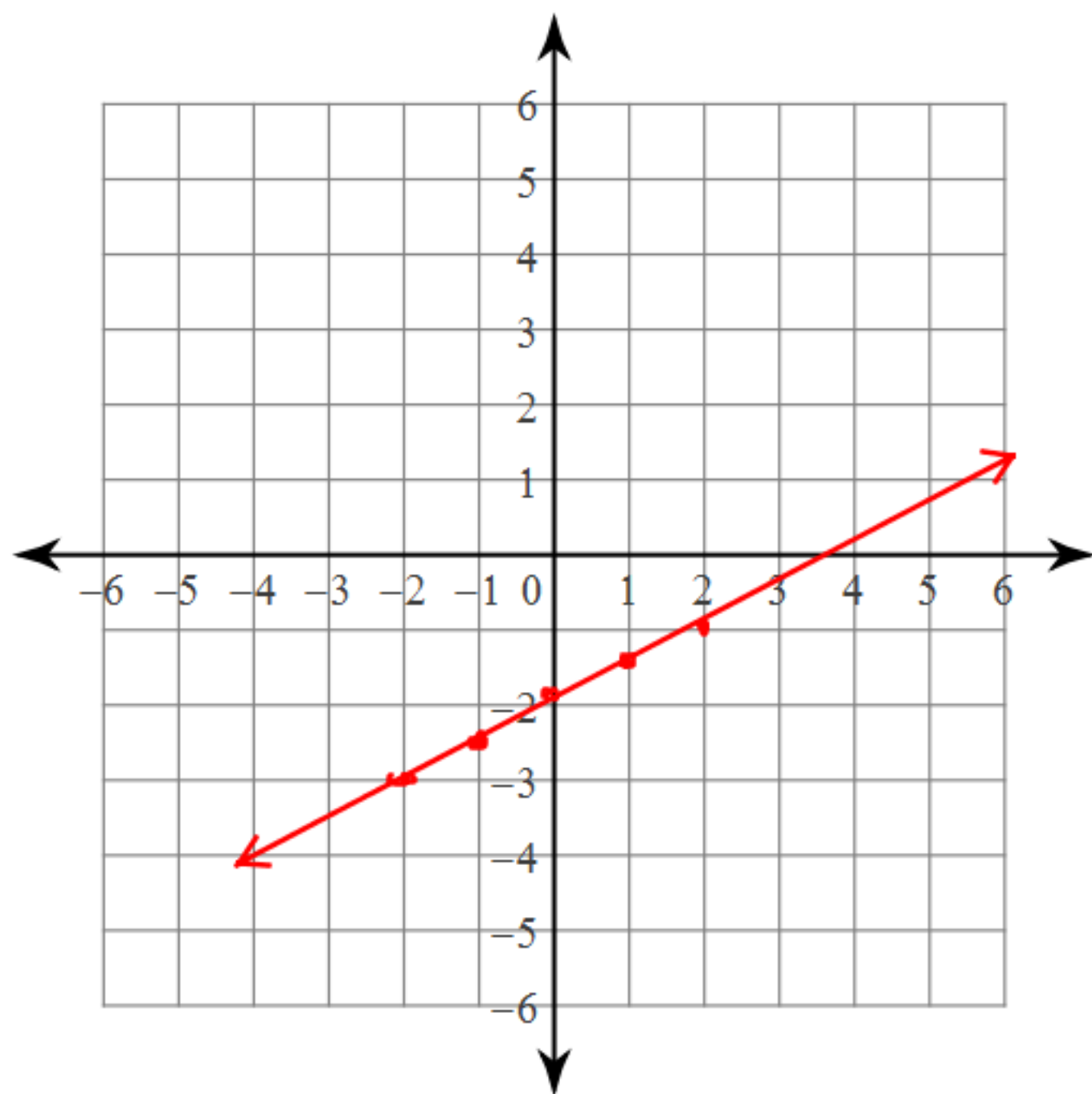
$$\cancel{x} + y = -4$$

$$y = -x - 4$$

x	y
-2	$-(-2) - 4 = -2$
-1	$-(-1) - 4 = -3$
0	$-(0) - 4 = -4$
1	$-(1) - 4 = -5$
2	$-(2) - 4 = -6$

$$\begin{aligned} &(-2, -2) \\ &(-1, -3) \\ &(0, -4) \\ &(1, -5) \\ &(2, -6) \end{aligned}$$

8) $x - 2y = 4$



$$\cancel{-x} - 2y = \cancel{-4}$$

$$\cancel{-2y} = \frac{-x}{-2} + \frac{4}{-2}$$

$$y = \frac{1}{2}x - 2$$

x	y
-2	$\frac{1}{2}(-2) - 2 = -3$
-1	$\frac{1}{2}(-1) - 2 = -2.5$
0	$\frac{1}{2}(0) - 2 = -2$
1	$\frac{1}{2}(1) - 2 = -1.5$
2	$\frac{1}{2}(2) - 2 = -1$

$(-2, -3)$
 $(-1, -2.5)$
 $(0, -2)$
 $(1, -1.5)$
 $(2, -1)$