

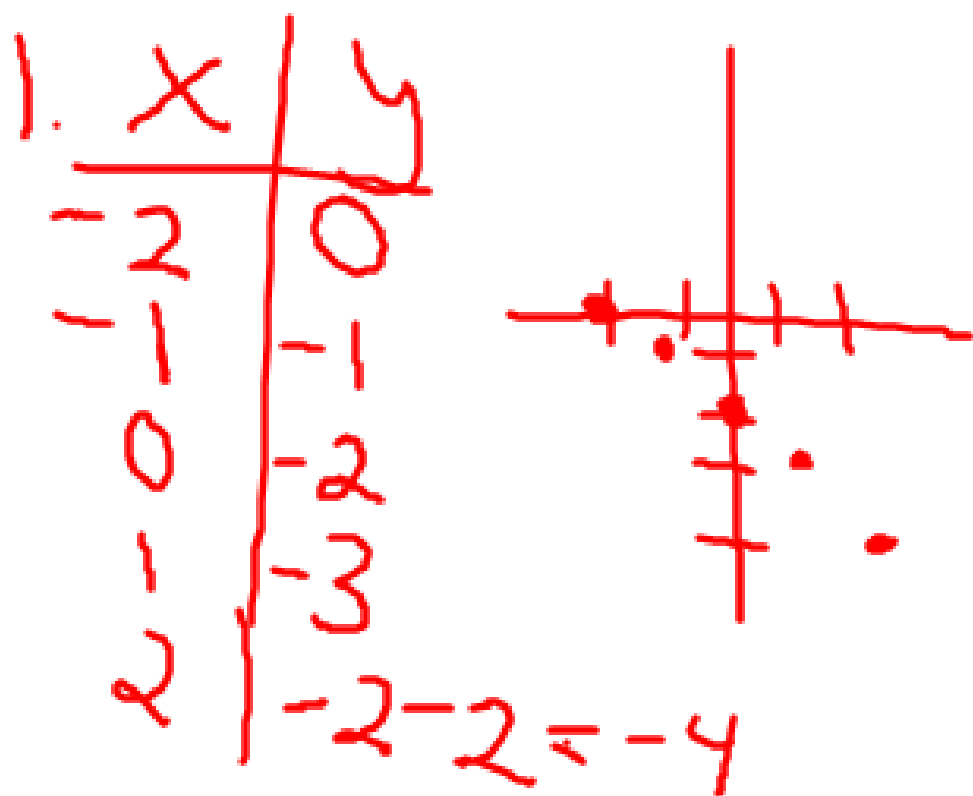
4.2a Warm-Up: 3.  $y = 6 + -3x$

1. Graph  $y = -x - 2$  with domain  $-2, -1, 0, 1,$  and  $2$ .

**Rewrite the equation so  $y$  is a function of  $x$ .**

2.  $3x + 4y = 16$

3.  $-6x - 2y = -12$



2.  $3x + 4y = 16$

$-3x$   $-3x$

$\frac{4y}{4} = \frac{16}{4} - \frac{3x}{4}$

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

Is the ordered pair a solution of the equation?

$$2y + x = 4 \quad \begin{matrix} x & y \\ (-2, & 3) \end{matrix}$$

$$2(3) + -2 \stackrel{?}{=} 4$$
$$6 + -2$$
$$4 = 4 \text{ yes}$$

$$x = 9 \quad \begin{matrix} (9, & 6) \\ (x, & y) \end{matrix}$$

$$9 = 9$$

yes

$$(x, y)$$

$$-7x - 4y = 1 \quad \begin{matrix} x & y \\ (-3, & -5) \end{matrix}$$

$$-7(-3) - 4(-5) \stackrel{?}{=} 1$$

$$21 + 20$$

$$41 \neq 1$$

Not a Solution

How many solutions are there for an equation?

$\infty$

Graph an equation.

$$-2x + y = -3$$

$$\begin{array}{r} +2x \quad +2x \\ \hline y = -3 + 2x \end{array}$$

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

$$y = -3 + 2(-1) = -3 + -2 = -5$$

$$y = -3 + 2 \cdot 0 = -3 + 0 = -3$$

$$y = -3 + 2 \cdot 1 = -3 + 2 = -1$$

$$y = -3 + 2 \cdot 2 = -3 + 4 = 1$$

Steps for your notes:

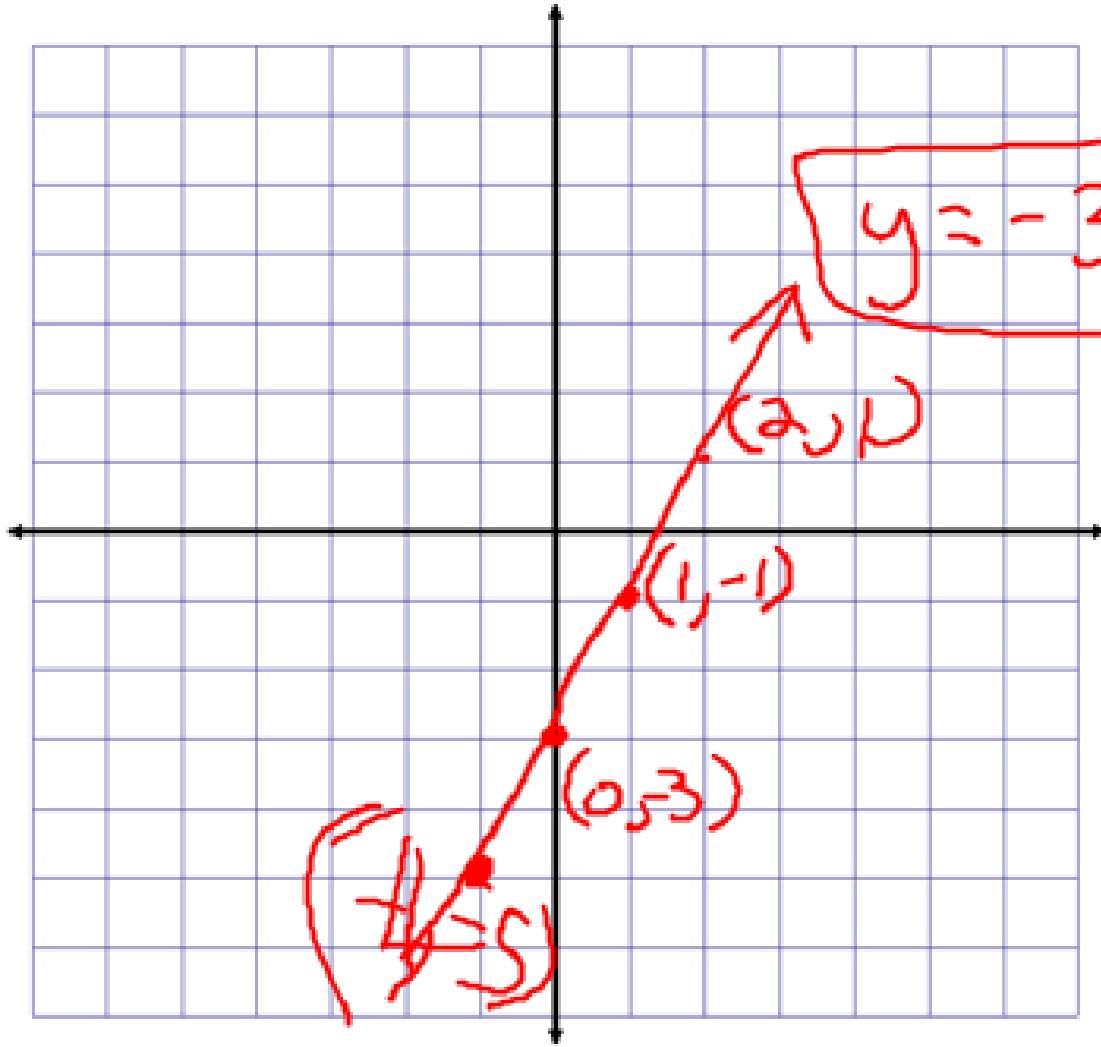
Solve for y. ✓

Make a table. ✓

Plot points. ✓

Connect pts. ✓

label line



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

Graph an equation.

$$y - 3x = 0$$

$$\begin{array}{r} y - 3x = 0 \\ + 3x + 3x \\ \hline y = 3x \end{array}$$

x	y
-1	-3
0	0
1	3
2	6

$3(-1)$

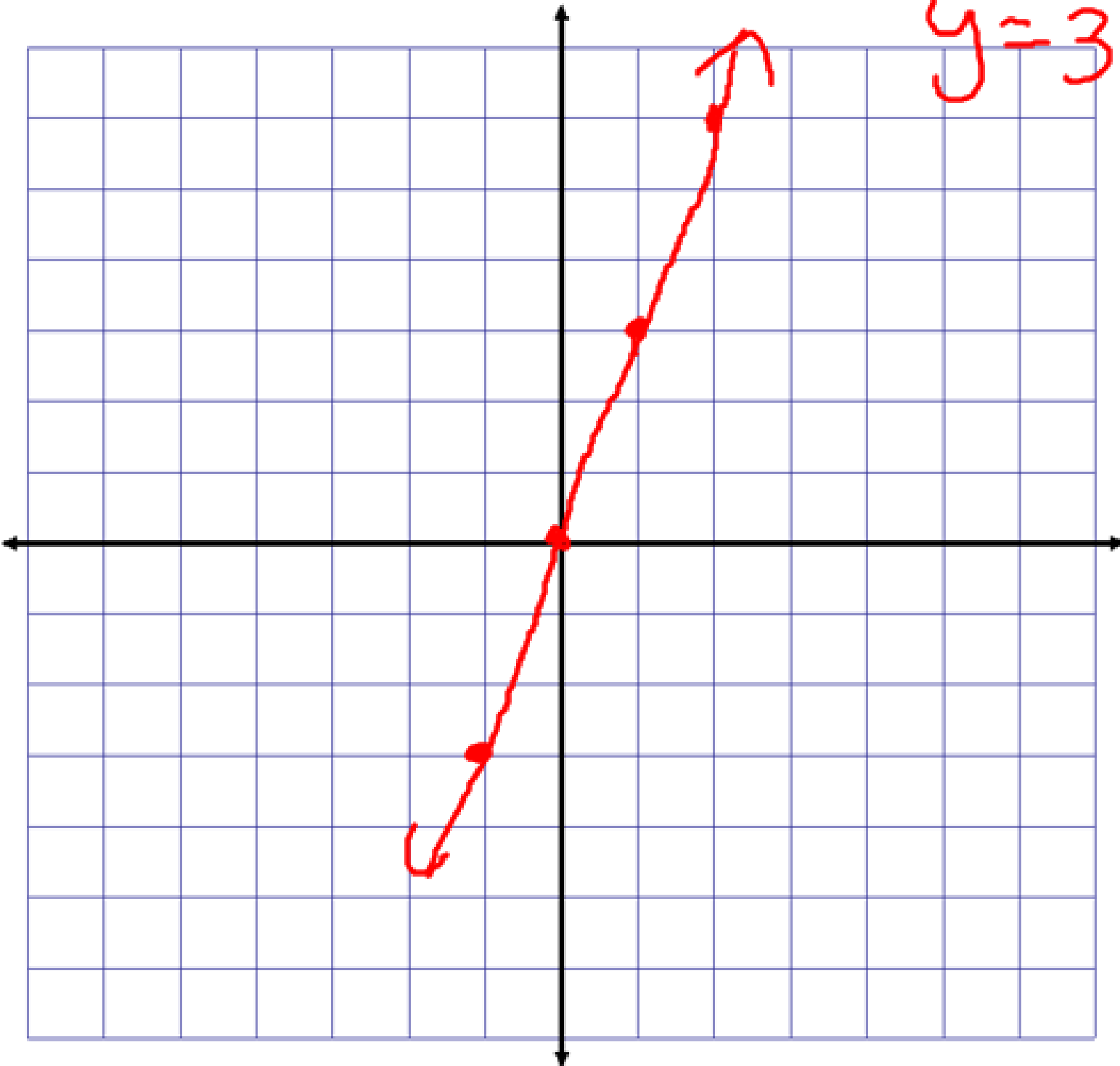
Steps for your notes:

Solve for y.

Make a table.

Plot points.

Connect pts.



$$y = 3x$$

Graph an equation.

$$2y - 6x = 10$$

$$\begin{array}{r} +6x \quad +6x \\ \hline 2y = 10 + 6x \\ \hline \frac{2y}{2} = \frac{10}{2} + \frac{6x}{2} \end{array}$$

$$y = 5 + 3x$$

x	y
-1	2
0	5
1	8

$$5 + 3(-1) = 5 + -3 = 2$$

$$5 + 3 \cdot 0 = 5 + 0 = 5$$

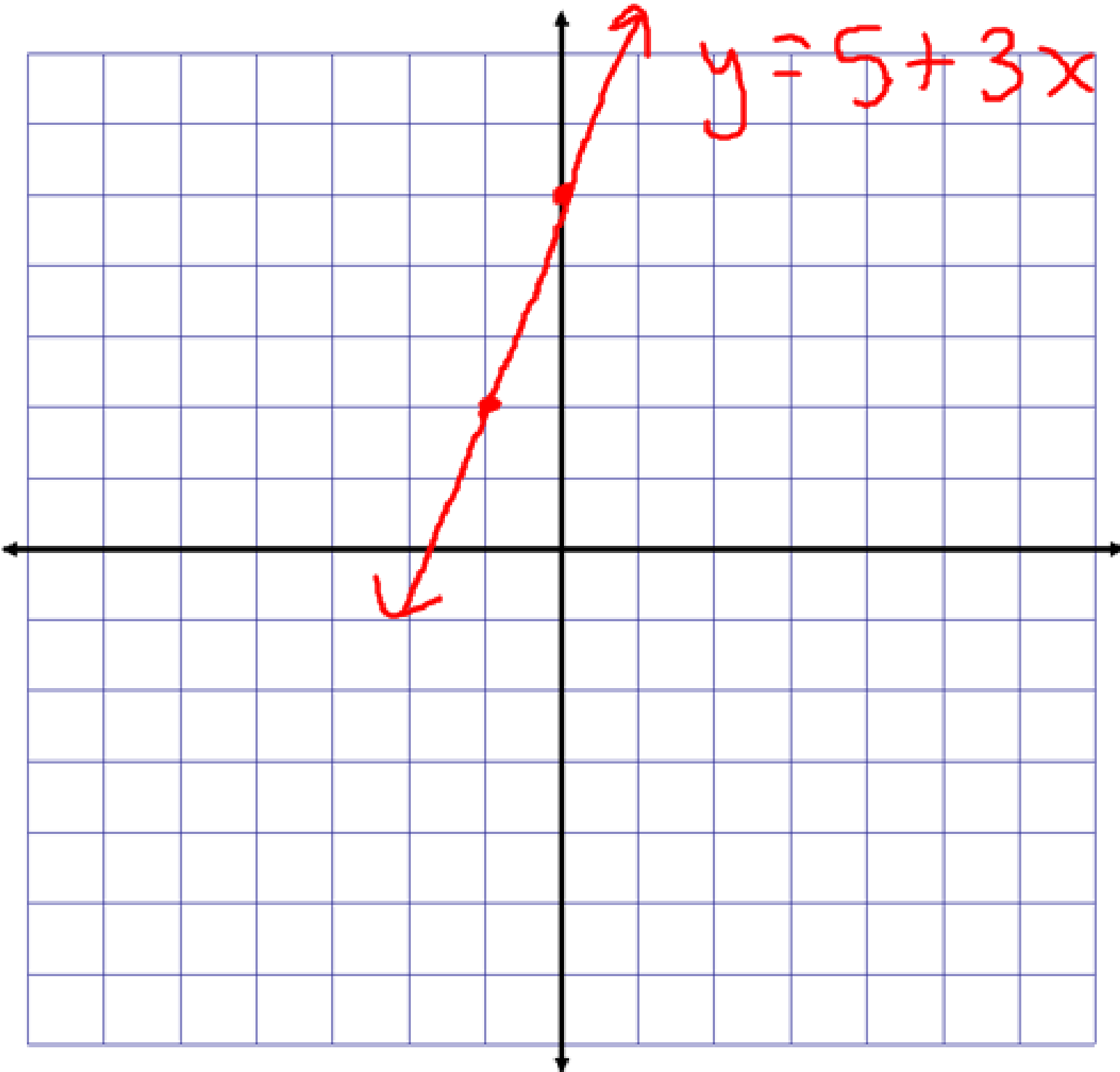
$$5 + 3 \cdot 1 = 5 + 3 = 8$$

Solve for y.

Make a table.

Plot points.

Connect pts  
label line



Graph an equation.

$$x - 2y = 3$$

$$\begin{array}{r} -x \qquad -x \\ \hline \end{array}$$

$$\frac{-2y}{-2} = \frac{3}{-2} - \frac{1x}{-2}$$

$$y = -\frac{3}{2} + \frac{1}{2}x$$

x	y	
-2	-2.5	$-1.5 + \frac{1}{2}(-2) = -1.5 + -1 = -2.5$
0	-1.5	$-1.5 + \frac{1}{2}(0) = -1.5$
2	-.5	$-1.5 + .5(2) = -1.5 + 1 = -.5$

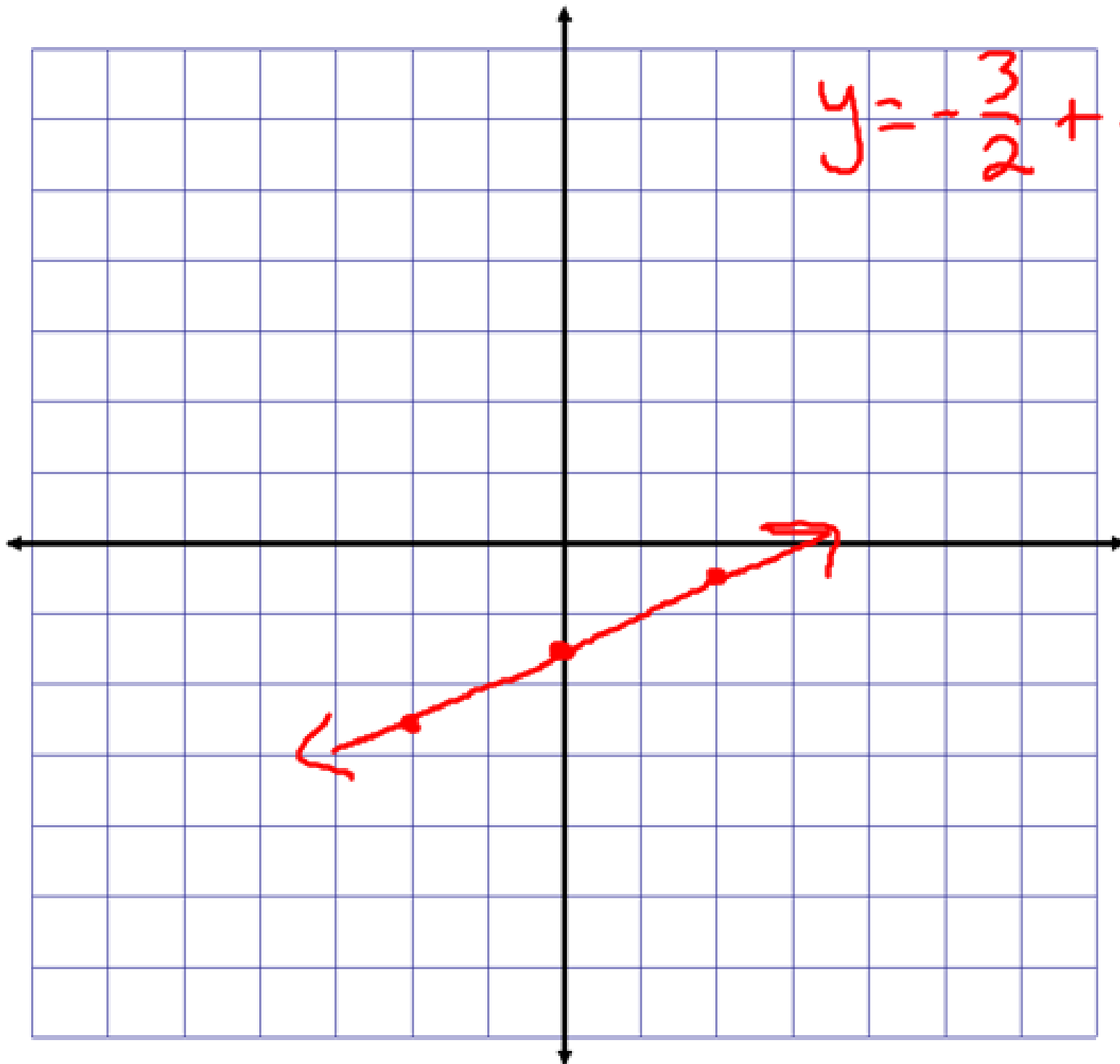
Solve for y.

Make a table.

Plot points.

Connect pts

$$y = -\frac{3}{2} + \frac{1}{2}x$$



standard form -

$y$  &  $x$  are  
on same side

linear equation -

an equation  
that when  
graphed is a  
line

Graph an equation.

~~$x=0$~~       "x is 2"  
 $x=2$

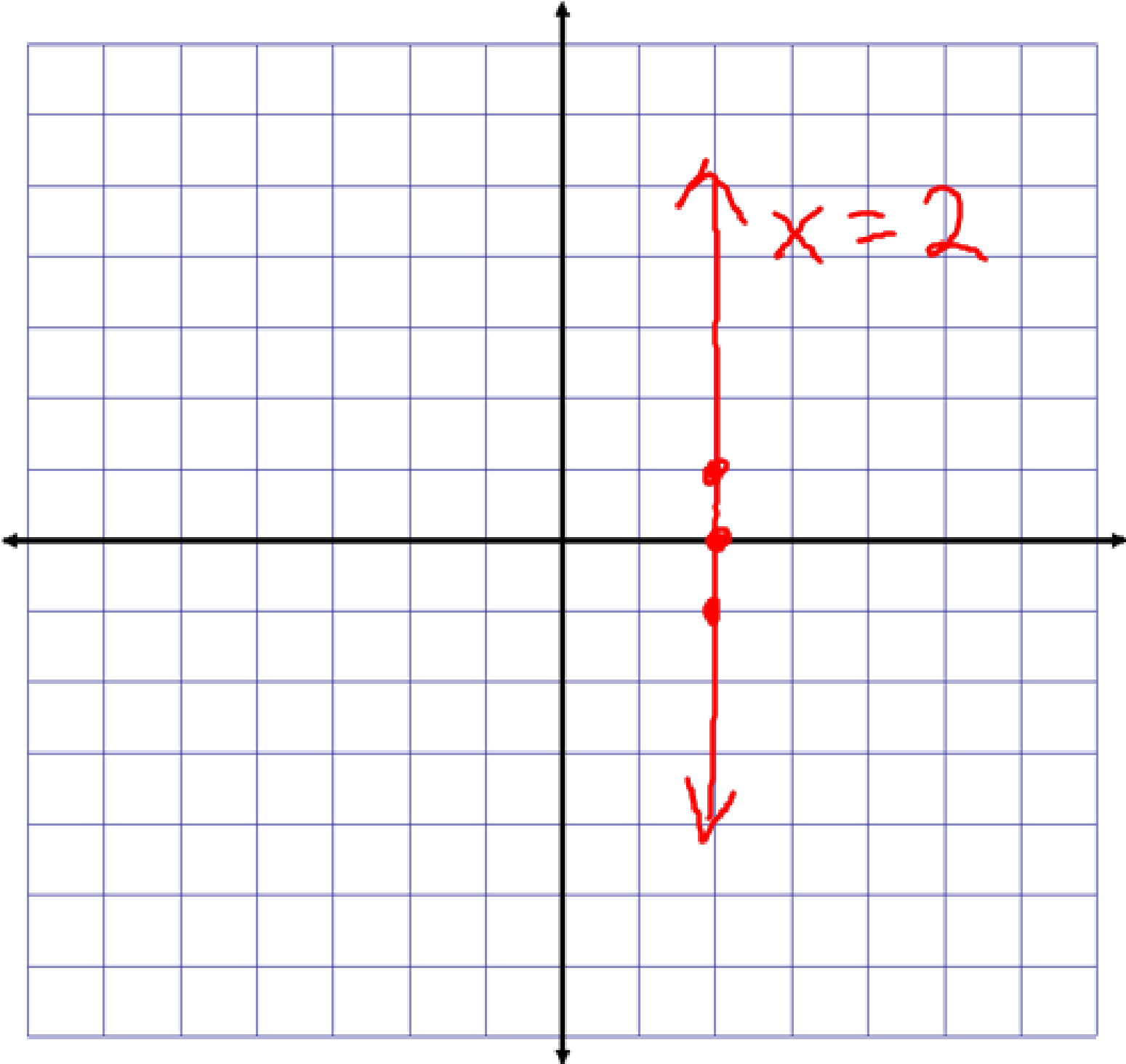
x	y
2	-1
2	0
2	10

Solve for y.

Make a table.

Plot points.

Connect pts



Graph an equation.

$$y = -4$$

"y is -4"

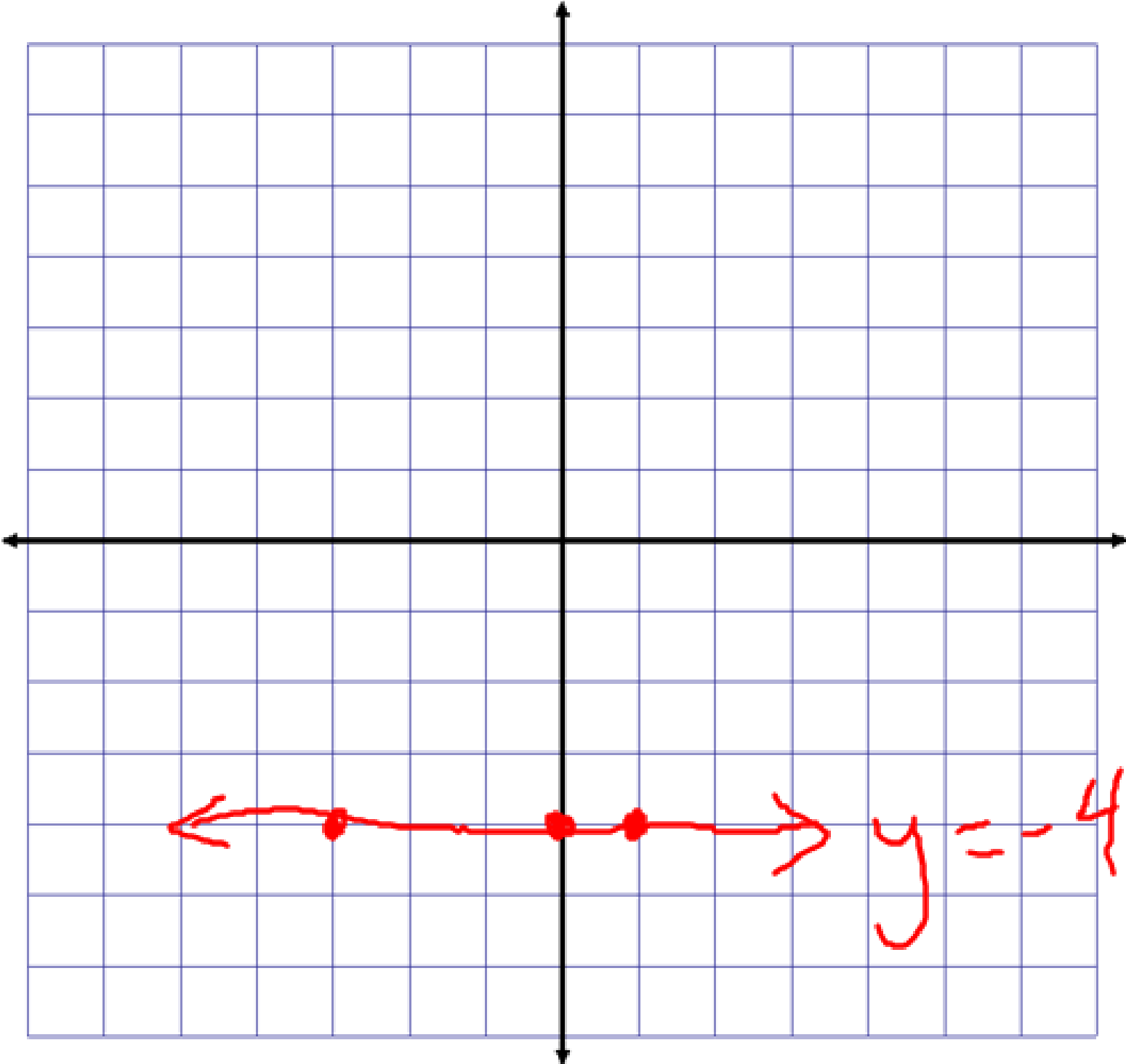
x	y
0	-4
1	-4
3	-4

Solve for y.

Make a table.

Plot points.

Connect pts



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#'s 2-10 even,  
12-22 E, 23-25,  
42-46 E