

4.2b Warm-Up:

$$-2y + 6x = 10$$

List the steps you use to graph an equation.

1. solve for y
2. make a table
3. plot pts
4. Draw a line
5. Label the line.

Graph an equation. Given domain.
Find the range.

$$y = -5x + 3$$

domain: $x \leq 0$

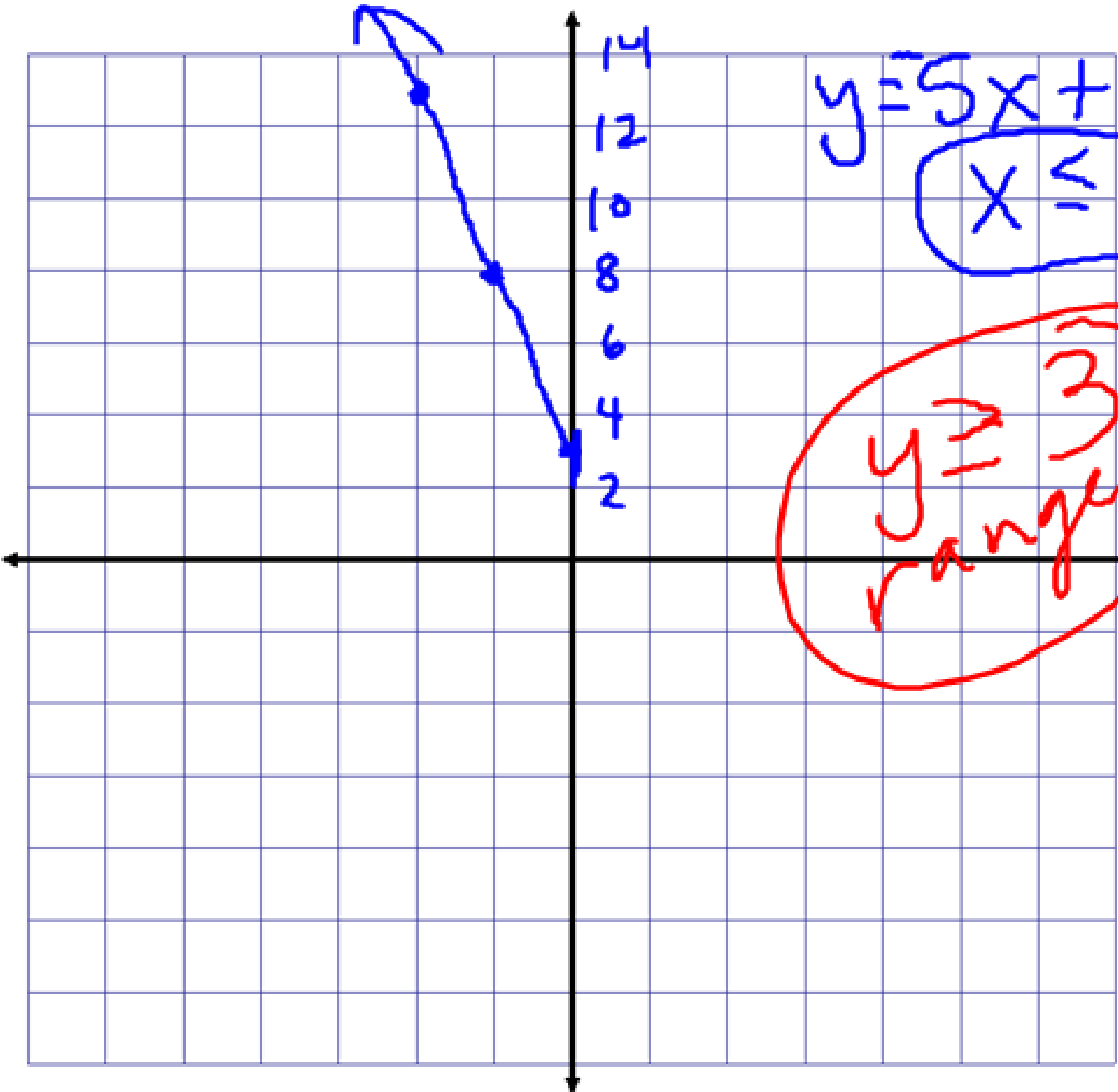
x	y	
0	3	$-5 \cdot 0 + 3$
-1	8	$-5(-1) + 3$
-2	13	$-5(-2) + 3$

Solve for y.

Make a table.

Plot points.

Connect pts



$$y = 5x + 3$$

$x \leq 0$

$y \rightarrow 3$
range

Graph an equation. Given domain.

$$y = -3x + 1$$

domain: $x \leq 0$

x	y
0	1
-1	4
-2	7

$$-3 \cdot 0 + 1$$

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

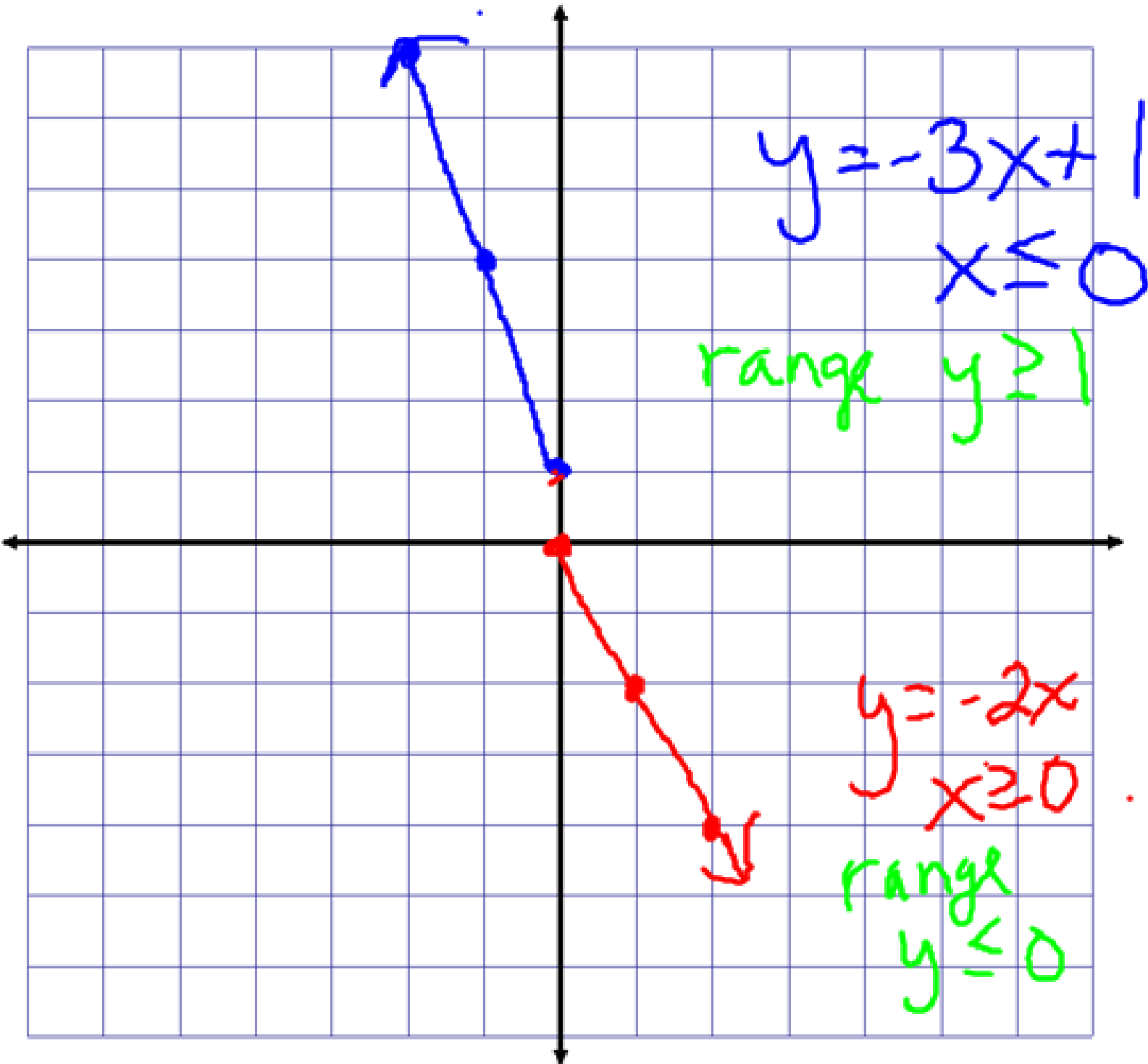
$$-3(-2) + 1 = 6 + 1$$

Solve for y.

Make a table.

Plot points.

Connect pts



$$y = -2x$$

$$x \geq 0$$

x	y
0	0
1	2
2	4

-2-0
-2-1
-2-2

Graph an equation. Given domain.

$y = 3$ ← y is 3
domain: $x \leq 2$

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

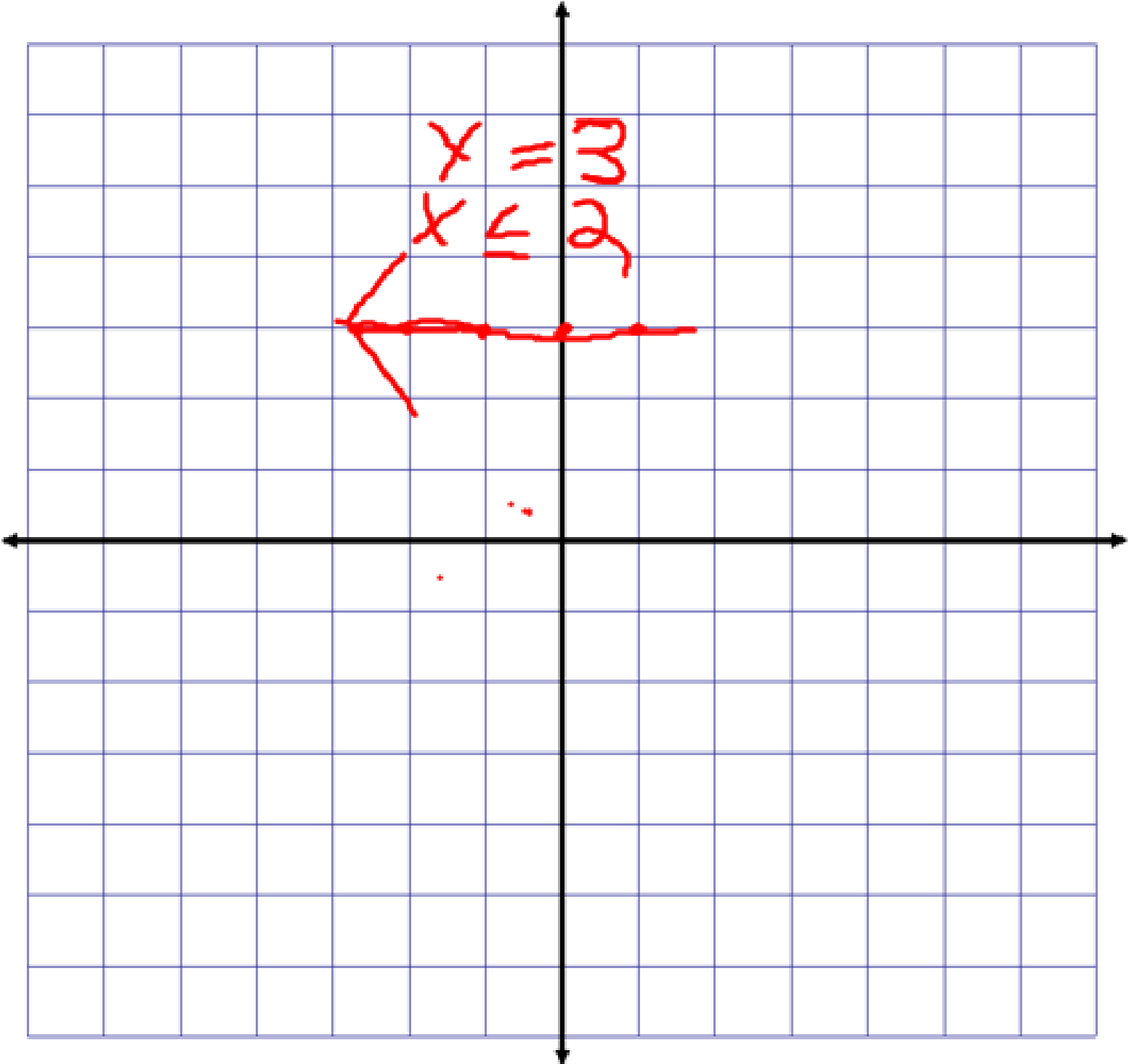
range
 $y = 3$

Solve for y .

Make a table.

Plot points.

Connect pts



Graph an equation. Given domain.

$y = -6$ ← y is -6
domain: $x \leq 5$

x	y
5	-6
4	-6
0	-6

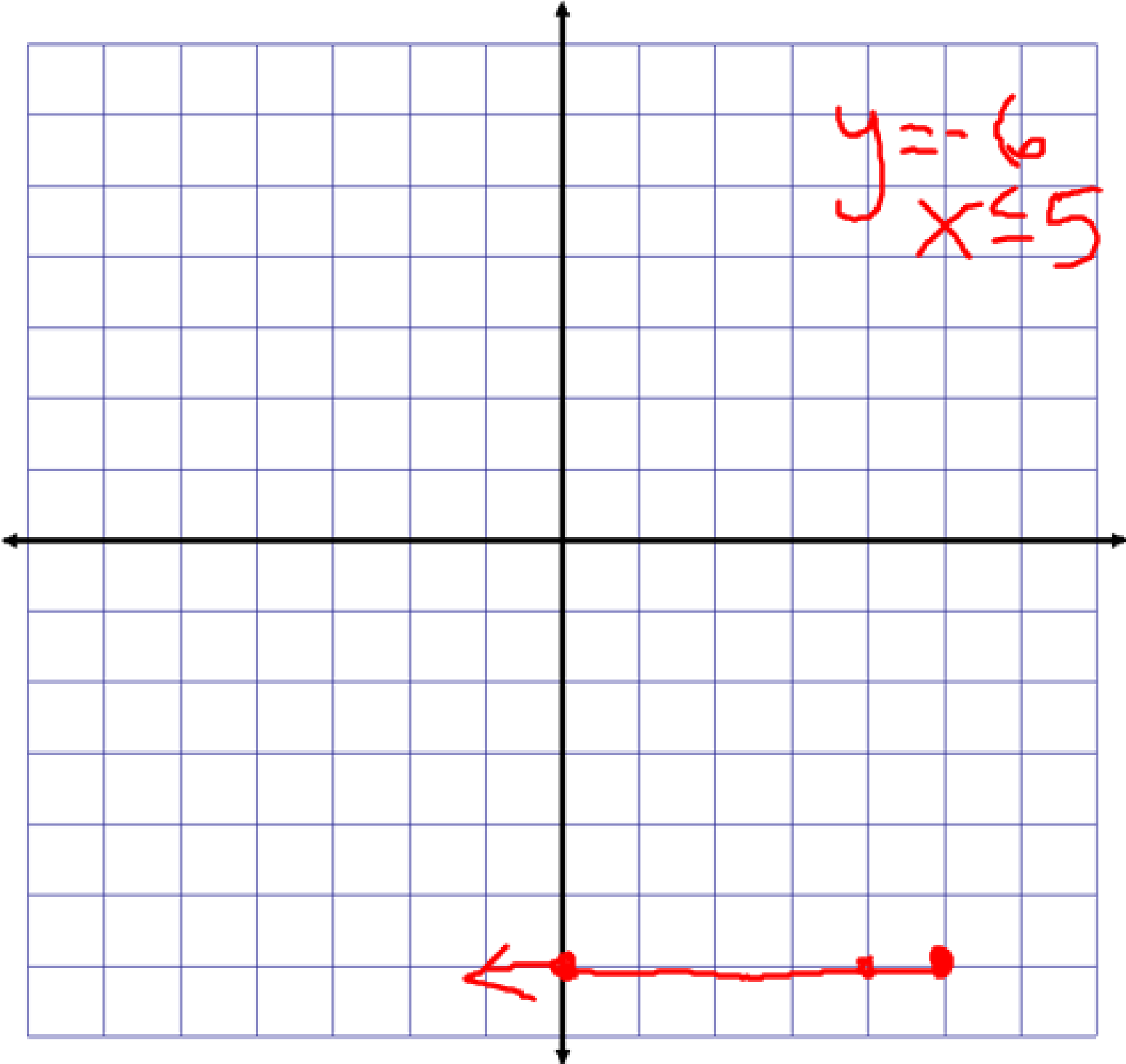
range:
 $y = -6$

Solve for y .

Make a table.

Plot points.

Connect pts



Graph an equation. Given domain.

$$y = 2x - 2$$

$$\text{domain: } -2 \leq x \leq 0$$

range
 $y \geq -6$
 $y \leq -2$

Solve for y.

Make a table.

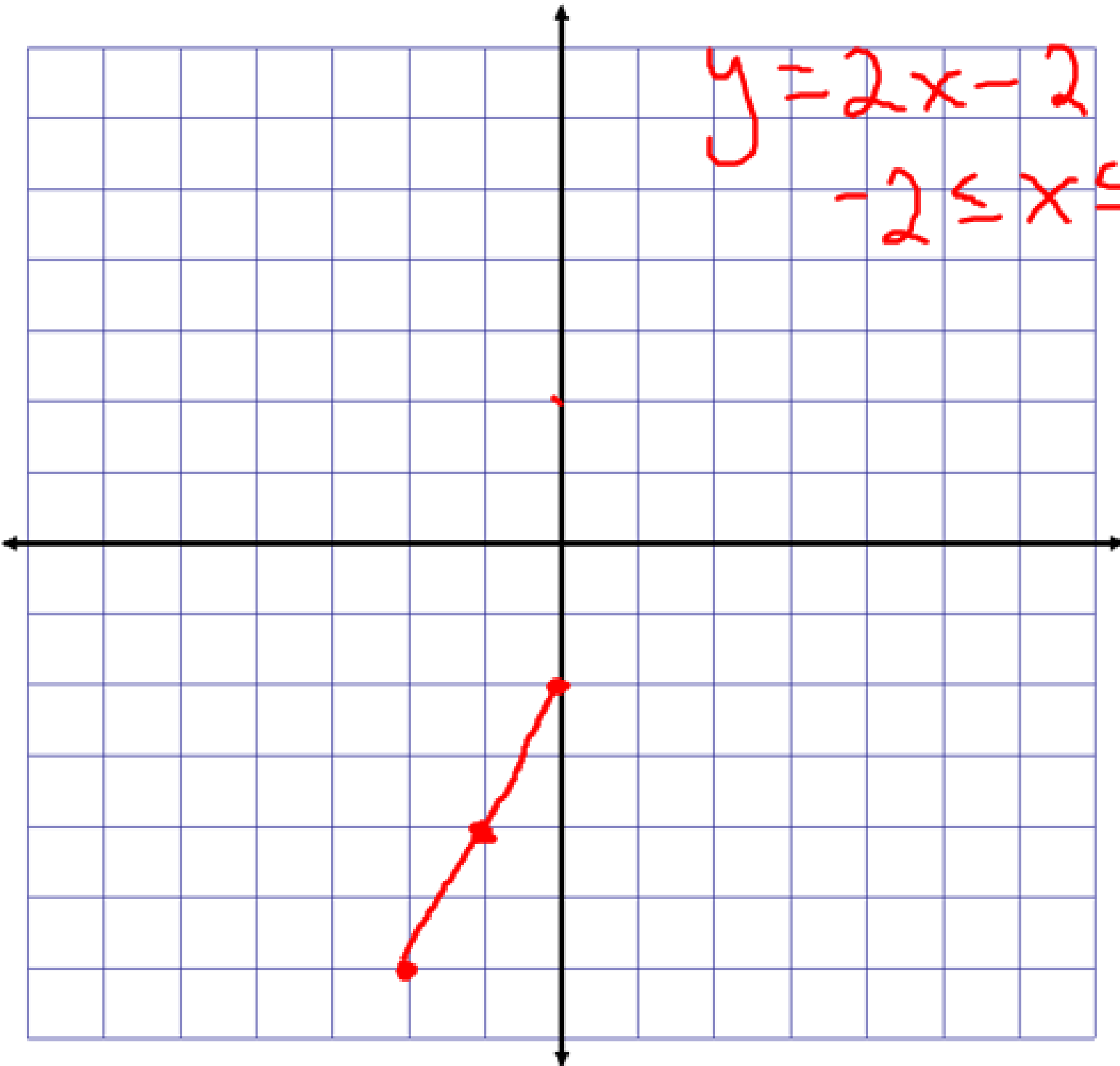
Plot points.

Connect pts

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

$$y = 2x - 2$$

$$-2 \leq x \leq 0$$



Graph an equation. Given domain.

$$y = -x + 3$$

$$\text{domain: } -3 \leq x \leq 4$$

$$\text{range } -1 \leq y \leq 6$$

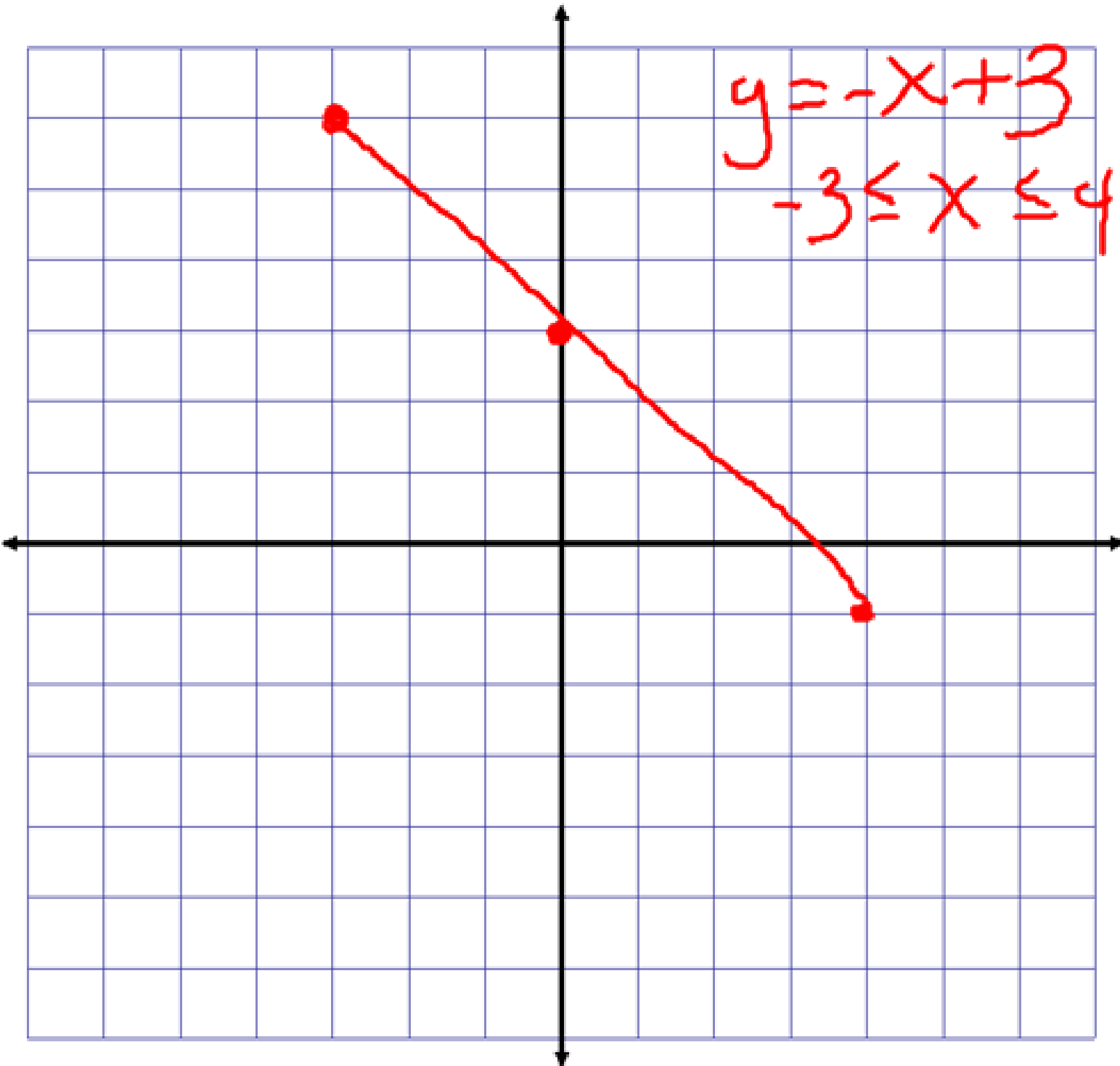
Solve for y.

Make a table.

Plot points.

Connect pts

x	y	
-3	6	$3 + 3$ $-1(-3) + 3$
0	3	$-1(0) + 3$
4	-1	$-1(4) + 3$ $-4 + 3$



$$y = -x + 3$$
$$-3 \leq x \leq 4$$

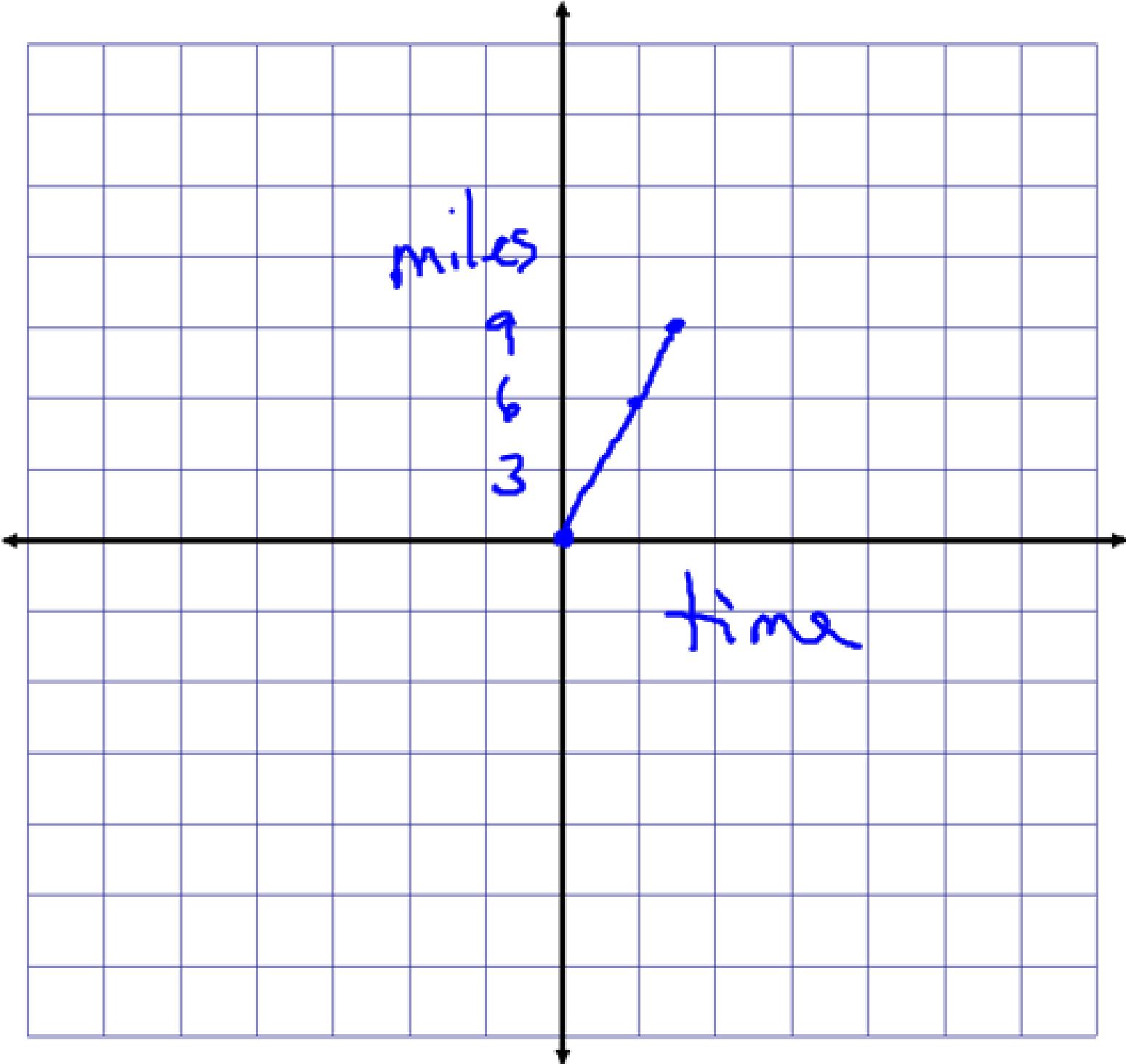
The distance d (in miles) that a runner travels is given by the function $d = 6t$ where t is the time (in hours) spent running. The runner plans to go for a 1.5 hour run. Graph the function and identify its domain and range.

$$d = 6t$$

t	d
1.5	9
1	6
0	0

$t \geq 0$, $t \leq 1.5$, $d \geq 0$, $d \leq 9$ range

domain



For gas that costs \$3 per gallon, the equation $C = 3g$ gives the cost C (in dollars) of g gallons of gas. You plan to pump \$12 worth of gas. Graph the function and identify its domain and range.

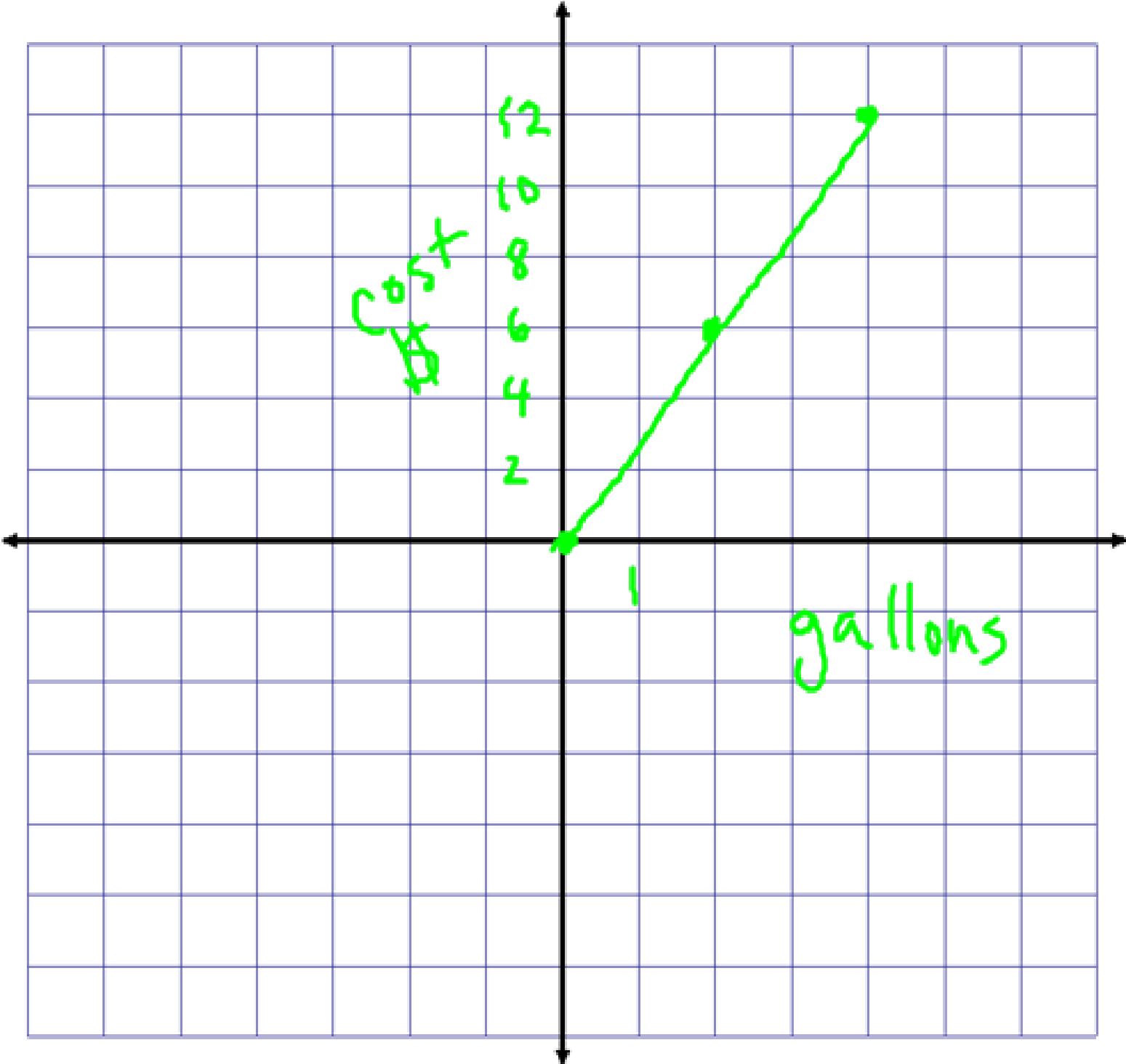
g	C
0	0
2	6
4	12

$$C \geq 0$$
$$C \leq 12$$

range

$$g \geq 0$$
$$g \leq 4$$

domain



p 219

#'s 26-31, 35, 36, 48-54E