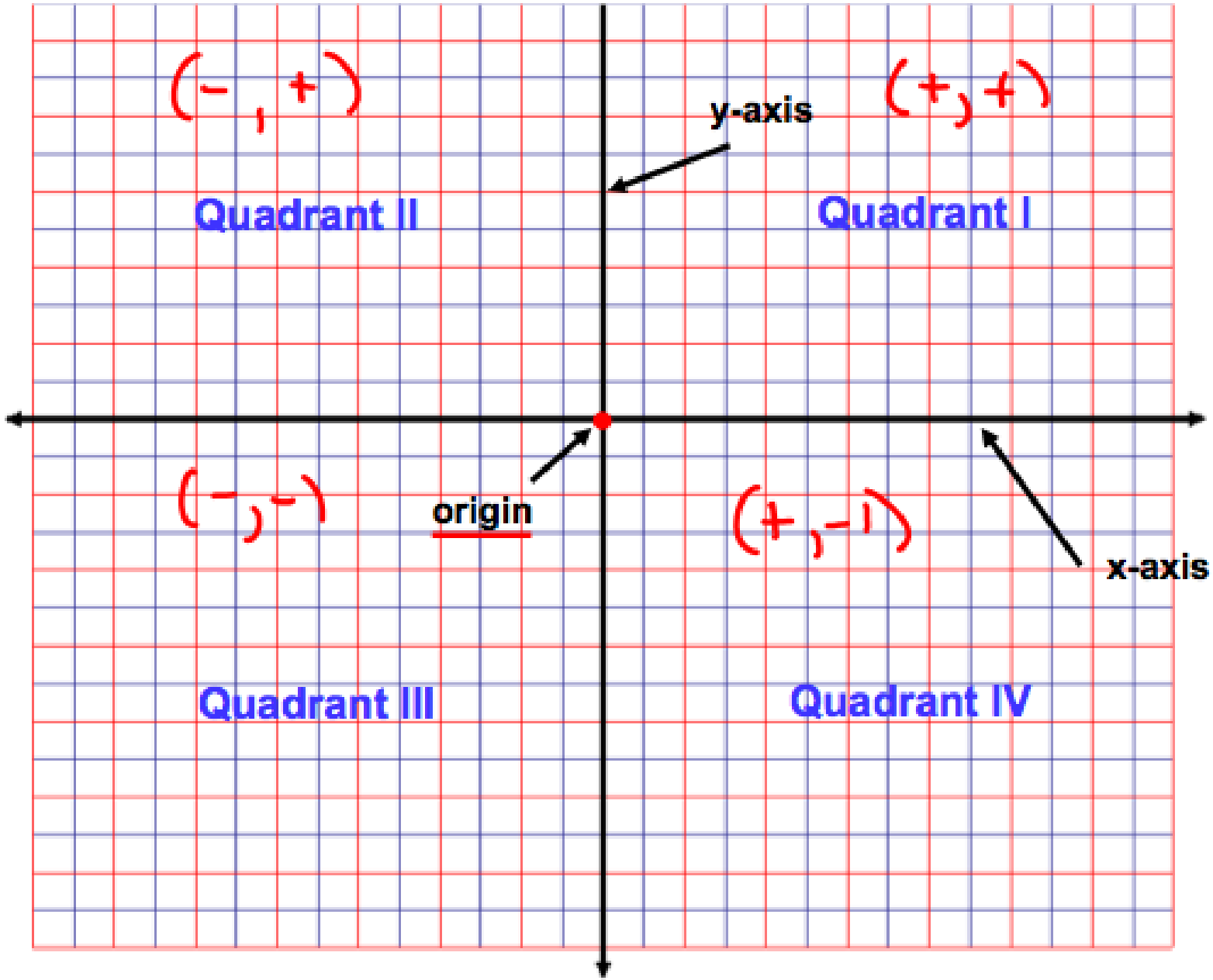
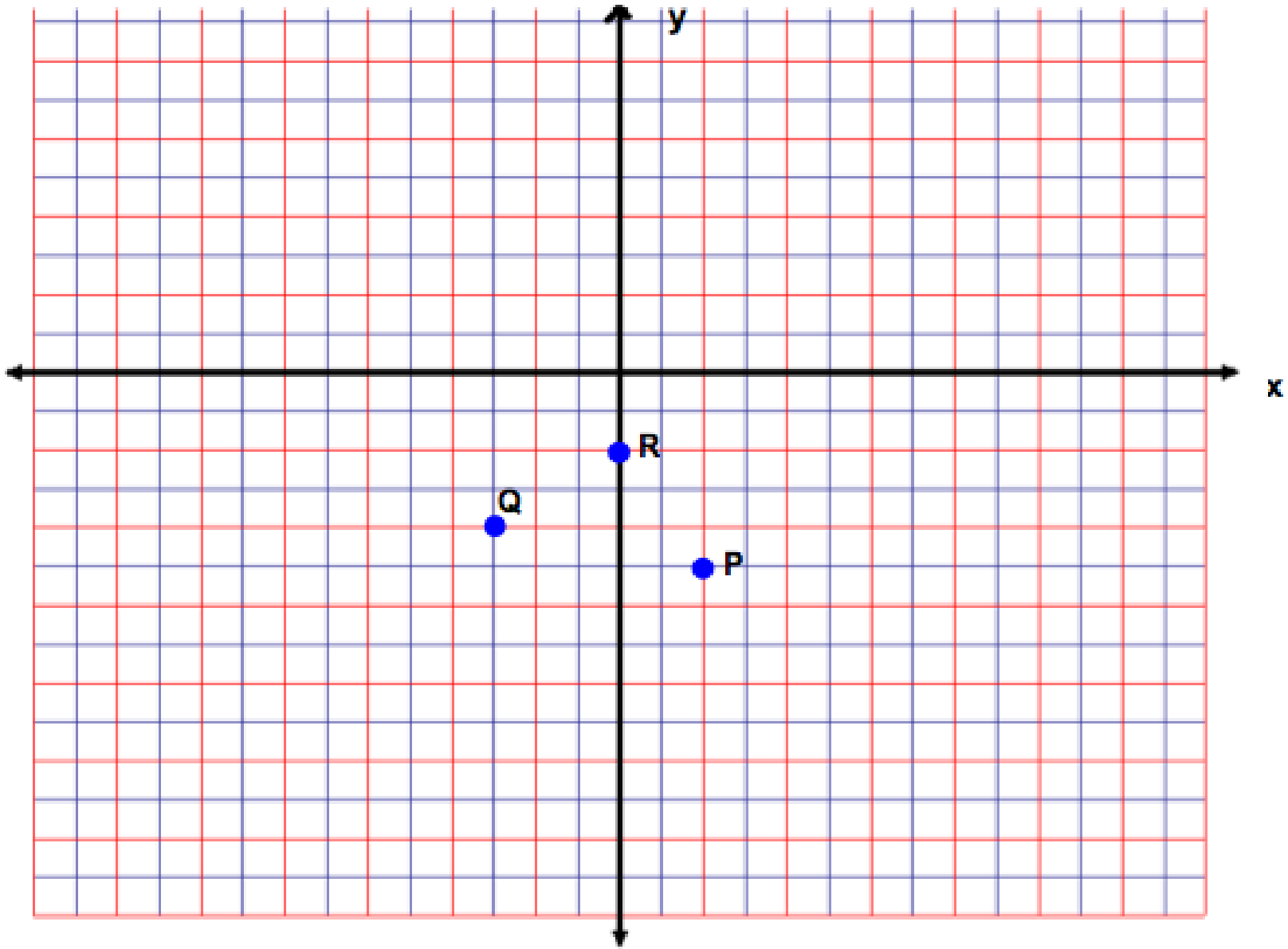
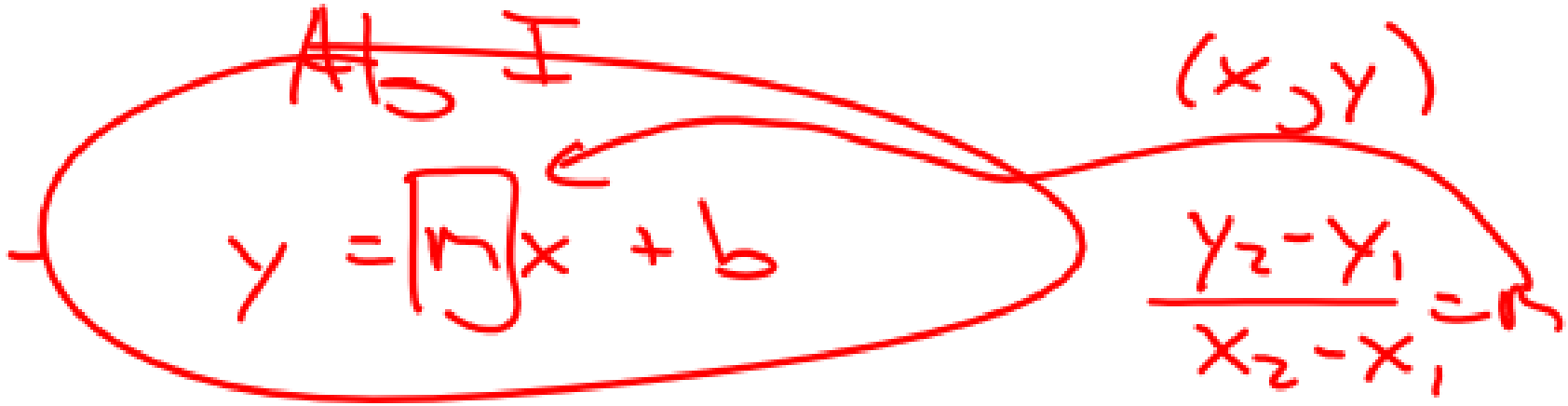
Lesson 1-1: Integration: Algebra
"The Coordinate Plane"



Example: **Write the coordinates for points P, Q, and R.**

Which points are collinear? Which are noncollinear?





- $y_2 - y_1 = m(x_2 - x_1)$

- $Ax + By = C$ ✓

$$5x' = 3 + y'$$

$$5x^2 = 3 + y$$

Make a Table

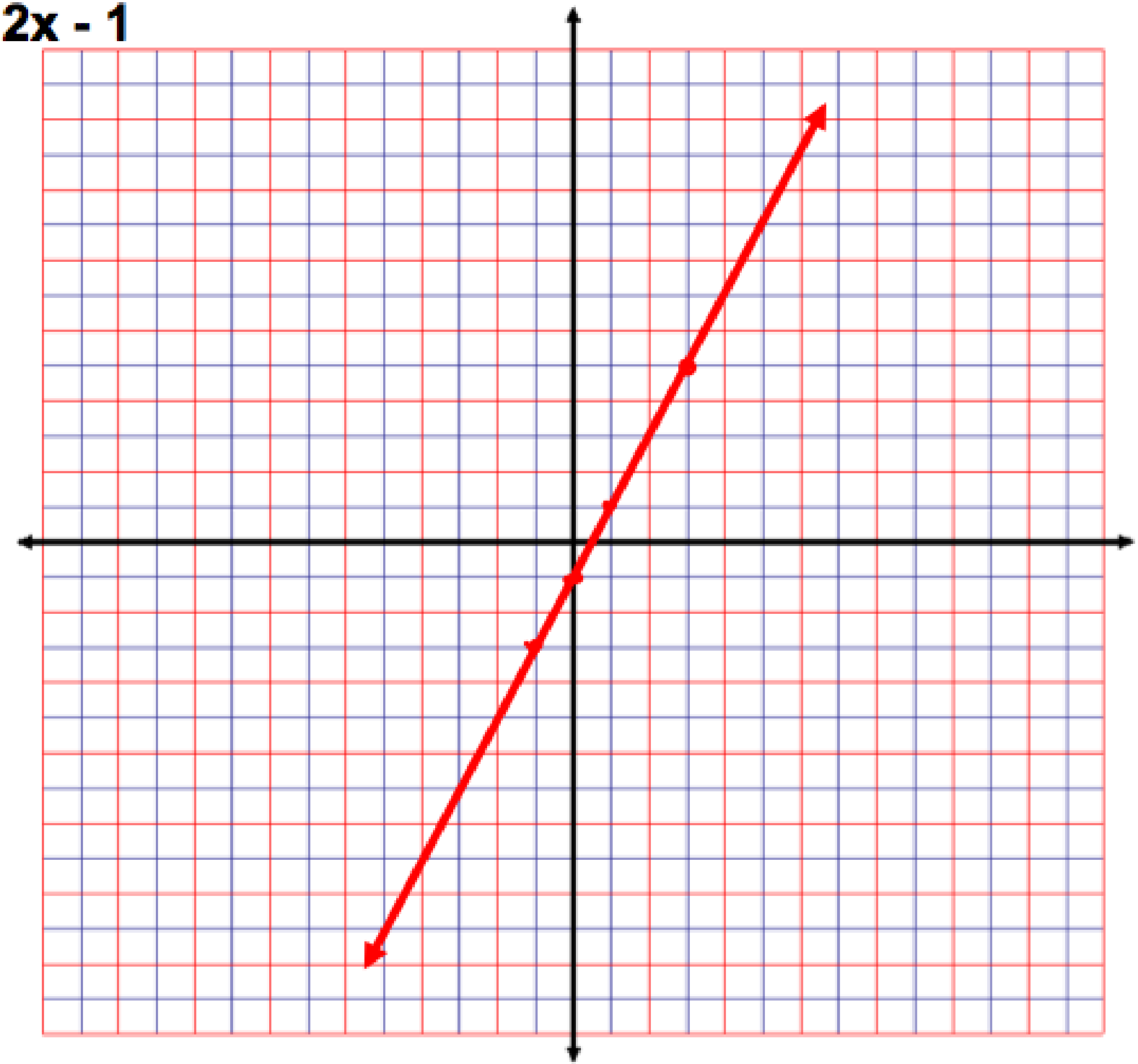
$y = 2(5) - 1$

$y = 5$

$y = 2x - 1$		
x	**y**	**(x,y)**
3	5	
-1	-3	
0	-1	
1	1	

(5, 8)

$y = 2x - 1$



a. Find the coordinates of three points that lie on the graph of $y = -3x + 3$.

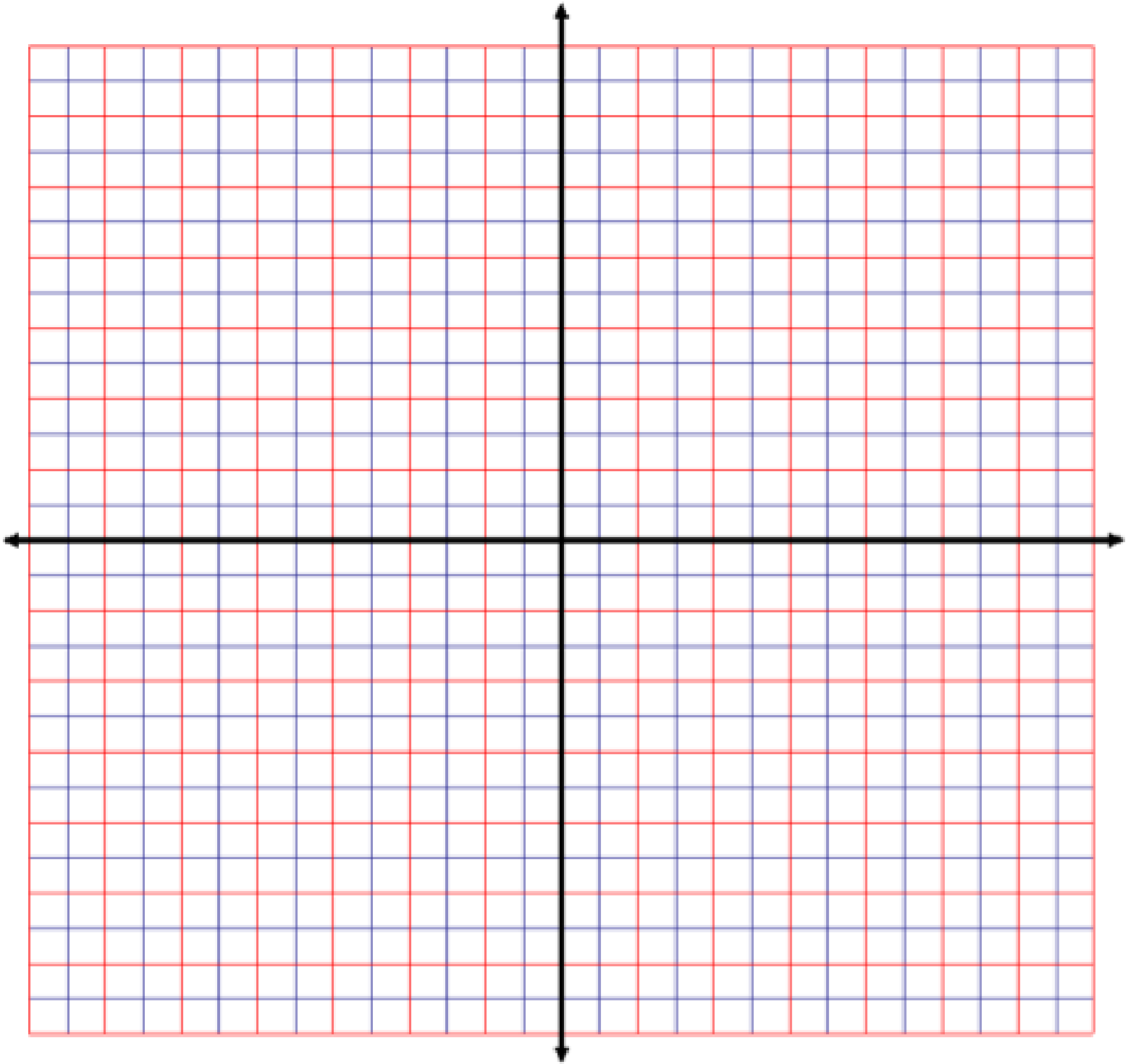
x	y
-1	6
0	3
1	0

b. Graph the points and draw the line representing $y = -3x + 3$.

c. Name the coordinate of one point not on the line.

(-1, 7)

y = -3x + 3		
x	y	(x,y)



x	y
-1	-9
0	-6
1	-3

a. Find the coordinates of three points that lie on the graph of $6x - 2y = 12$.

$-2y = -6x + 12$

$y = 3x - 6$

$6(-1) - 2y = 12$

$-6 - 2y = 12$

$-2y = 18$

$y = -9$

b. Graph the points and the line representing $6x - 2y = 12$.

c. Name a coordinate of a point not on the line.

$$\frac{14m + 28}{7}$$

$$\frac{14m}{7} + \frac{28}{7}$$

$$2m$$