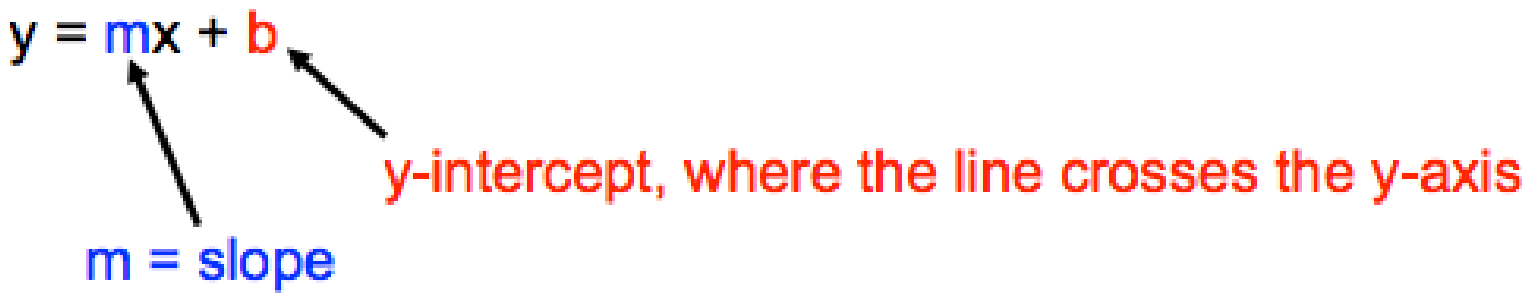
Chapter 4-6 Notes - Slope-Intercept Form



Slope-intercept form requires the "y" to be isolated.

To graph using slope and intercept

1) Plot the y-intercept as the first point.
2) Use the slope to move up (positive) or down (negative) and then to the right from the y-intercept to plot the second point.
3) Connect both points with a line and add the arrows to the end.

Parallel lines have the same slope. Therefore, if two lines have the same slope, then they are parallel lines.

Identify the slope and intercept for each equation.

1) $y = -2x + 6$

slope (m) = -2 or $\frac{-2}{1}$

y-intercept (b) = $(0, 6)$

2) $y = -1/3x - 4$

slope (m) = $\frac{-1}{3}$

y-intercept (b) = $(0, -4)$

3) $-2x - y = 5$

$+2x \quad +2x$

$-y = 2x + 5$

$\div -1$

$y = -2x + -5$

slope (m) = -2 or $\frac{-2}{1}$

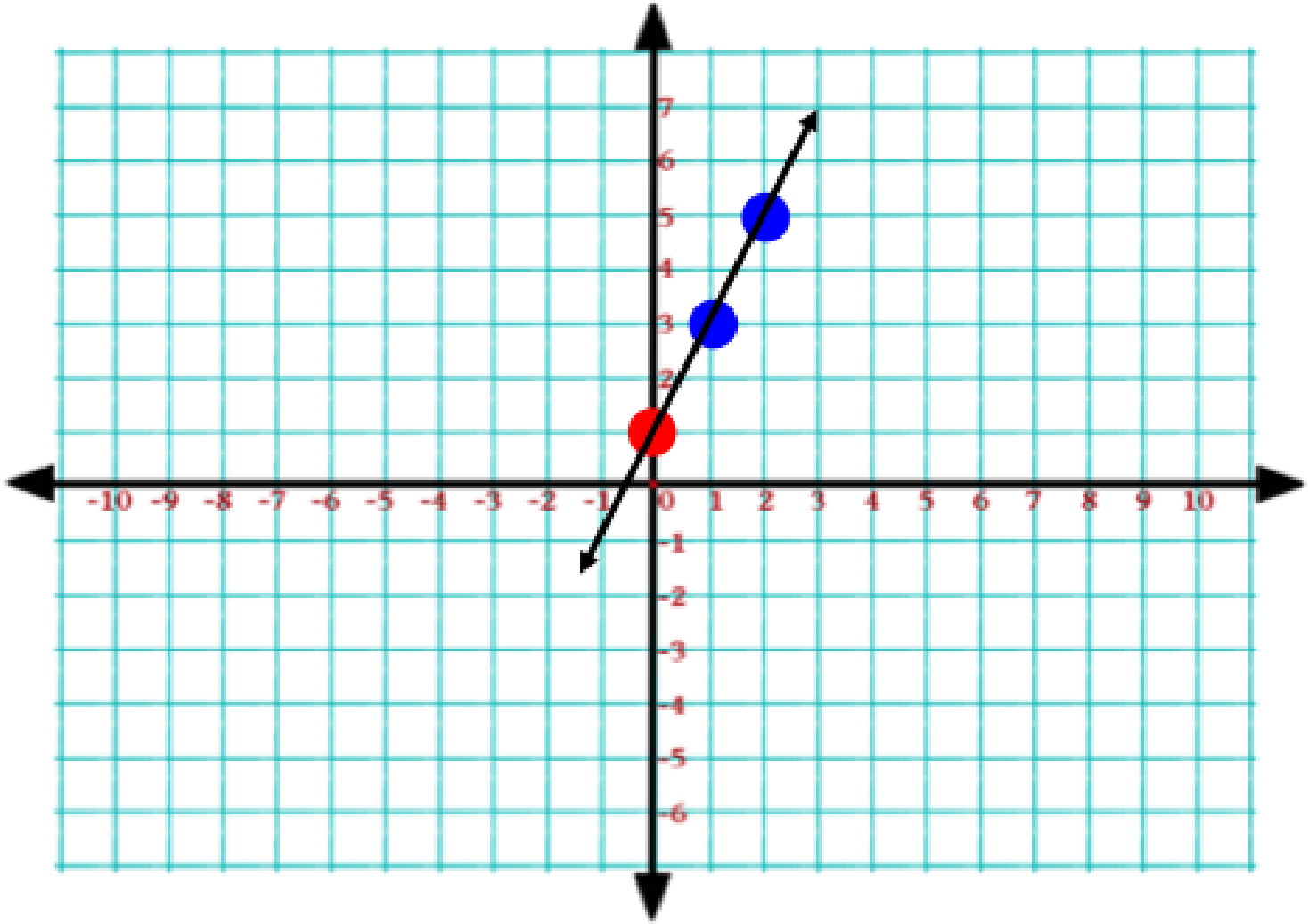
y-intercept (b) = $(0, -5)$

Graph using the slope and y-intercept

4) $y = 2x + 1$

$m = \frac{\text{rise}}{\text{run}}$

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



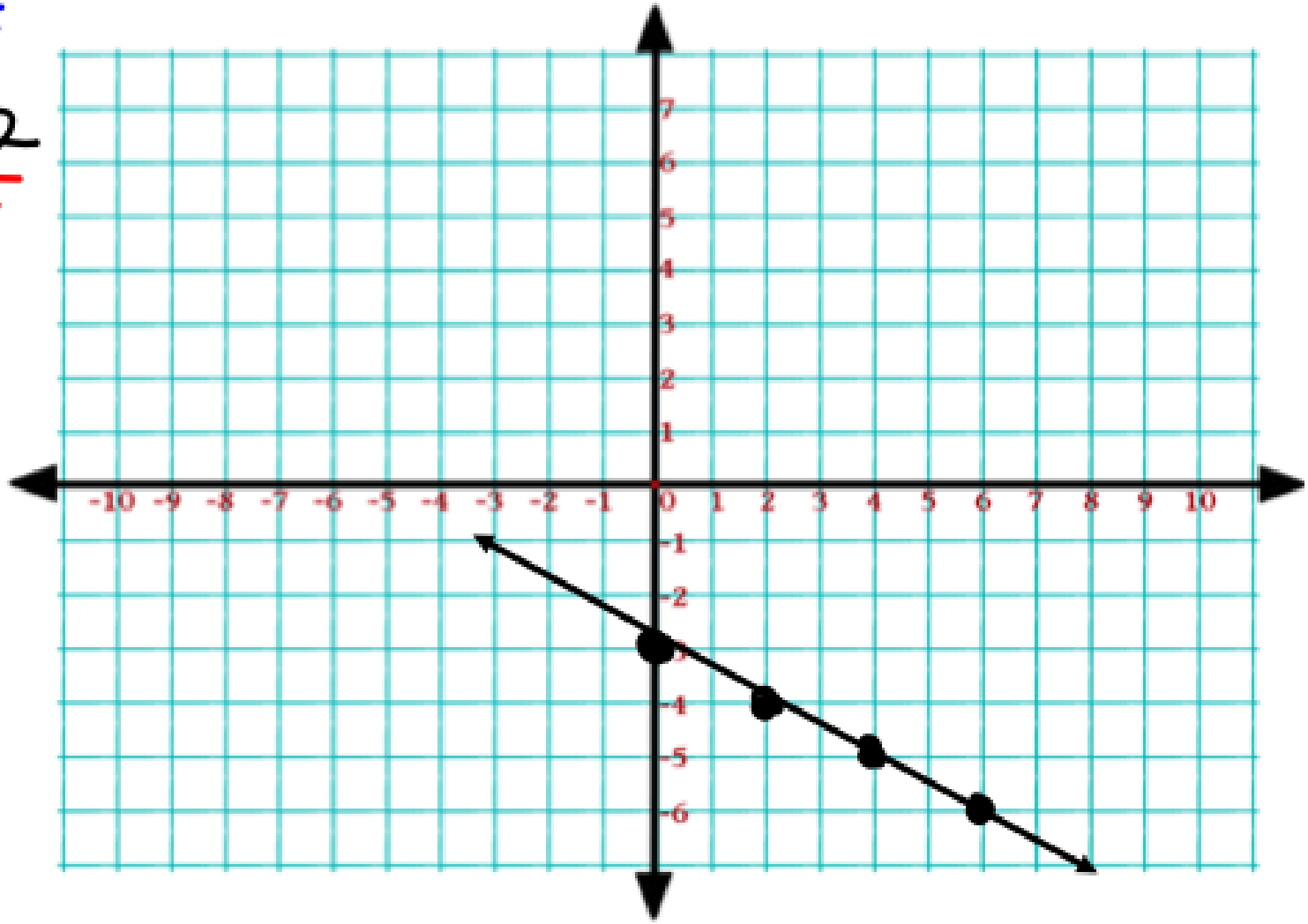
Graph using the slope and y-intercept

5) $4y + 2x = -12$

$-2x \quad -2x$

$$\frac{4y}{4} = \frac{-2x}{4} + \frac{-12}{4}$$

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

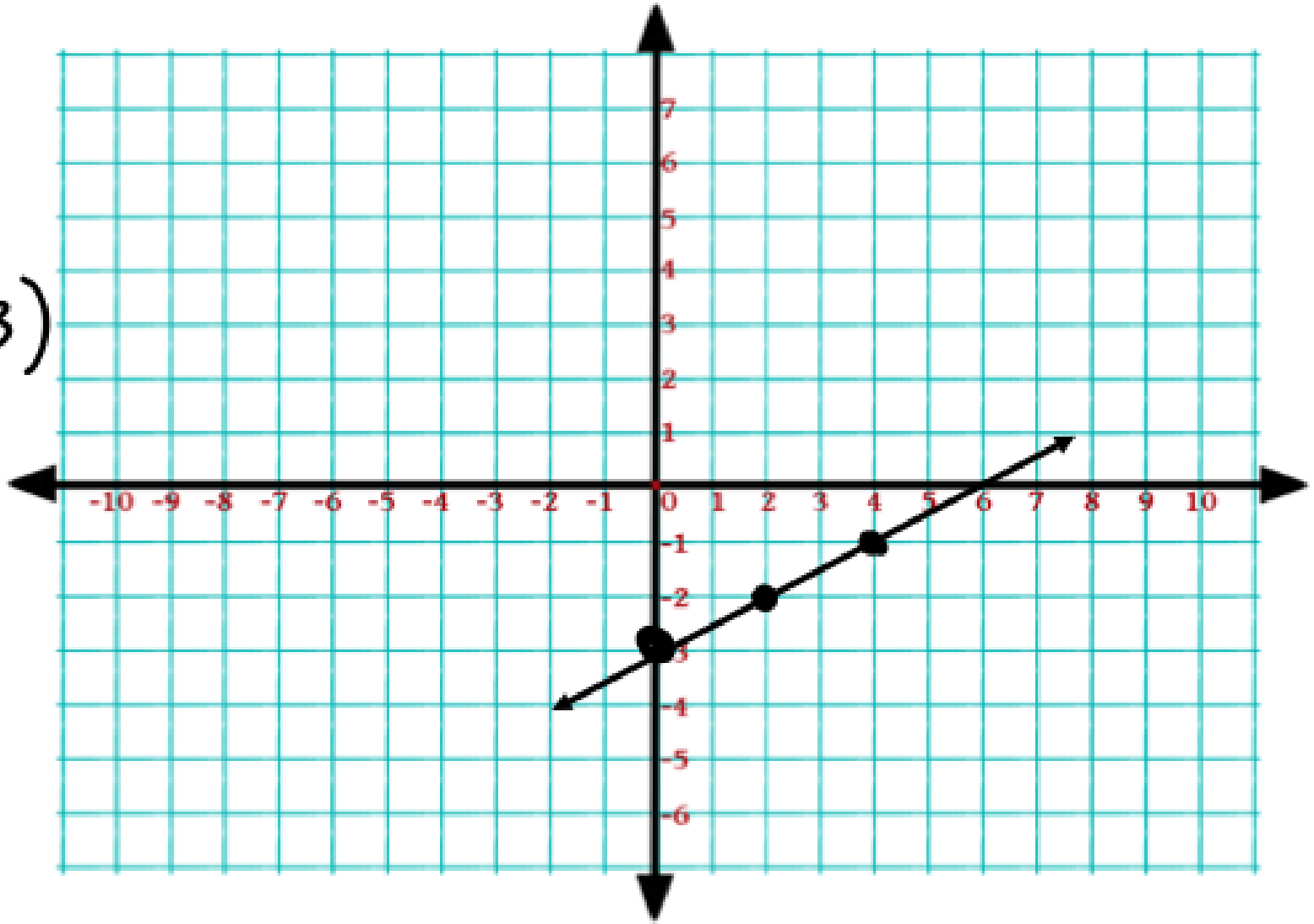


Graph using the slope and y-intercept

6) $y = \frac{x - 6}{2}$

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

y-int = $(0, -3)$

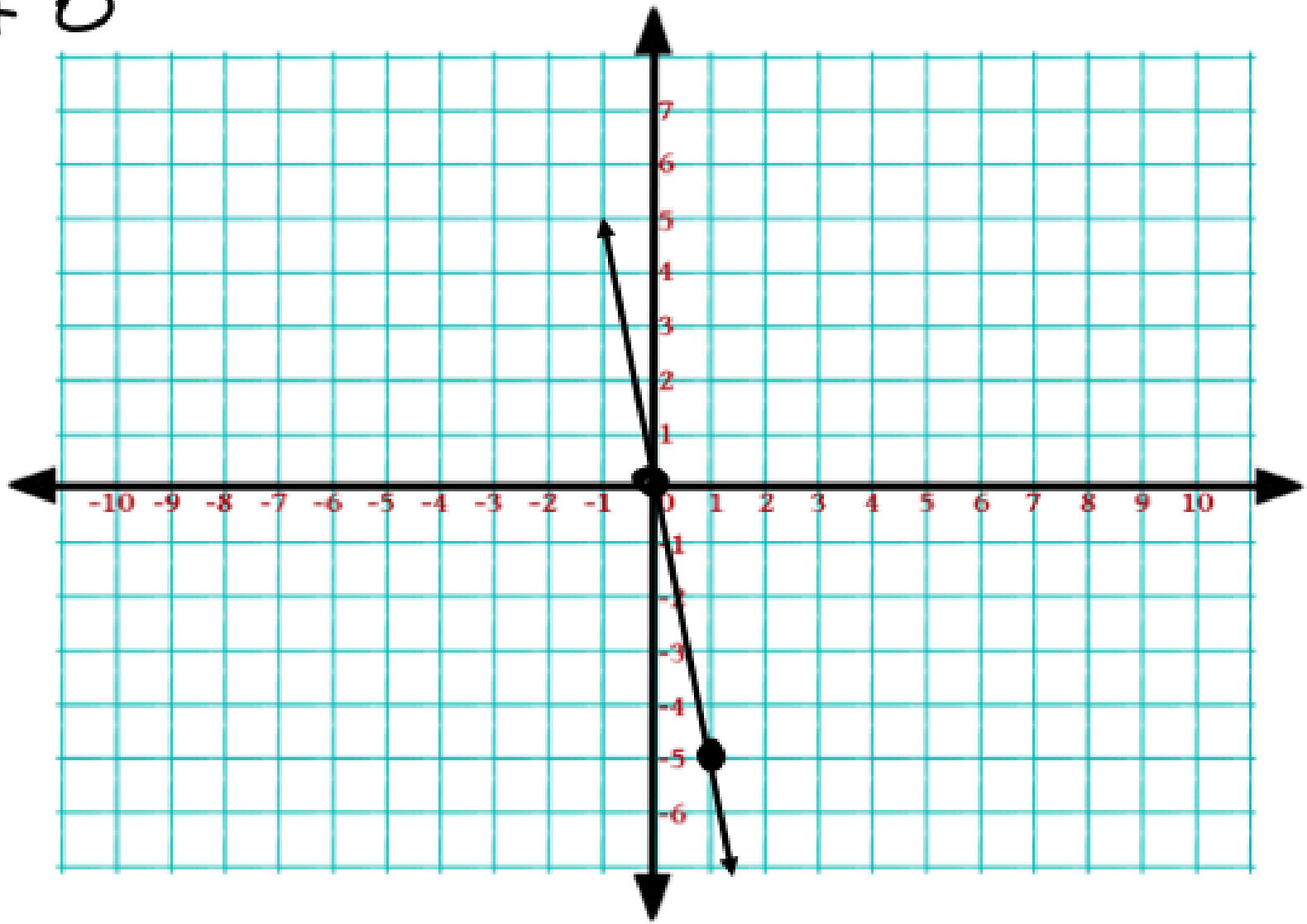


Graph using the slope and y-intercept

6) $y = -5x + 0$

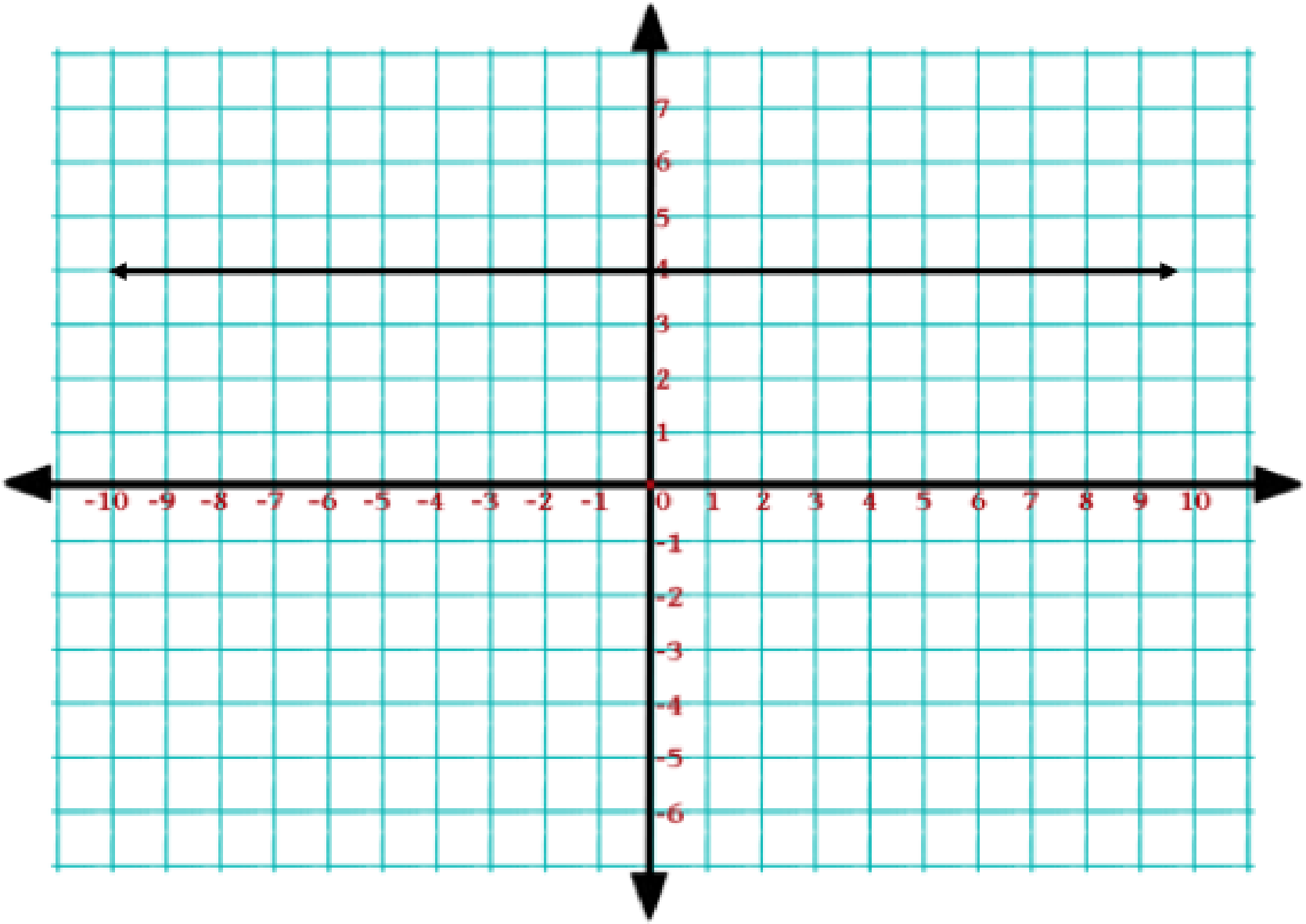
$m = \frac{-5}{1}$

y-int (0, 0)



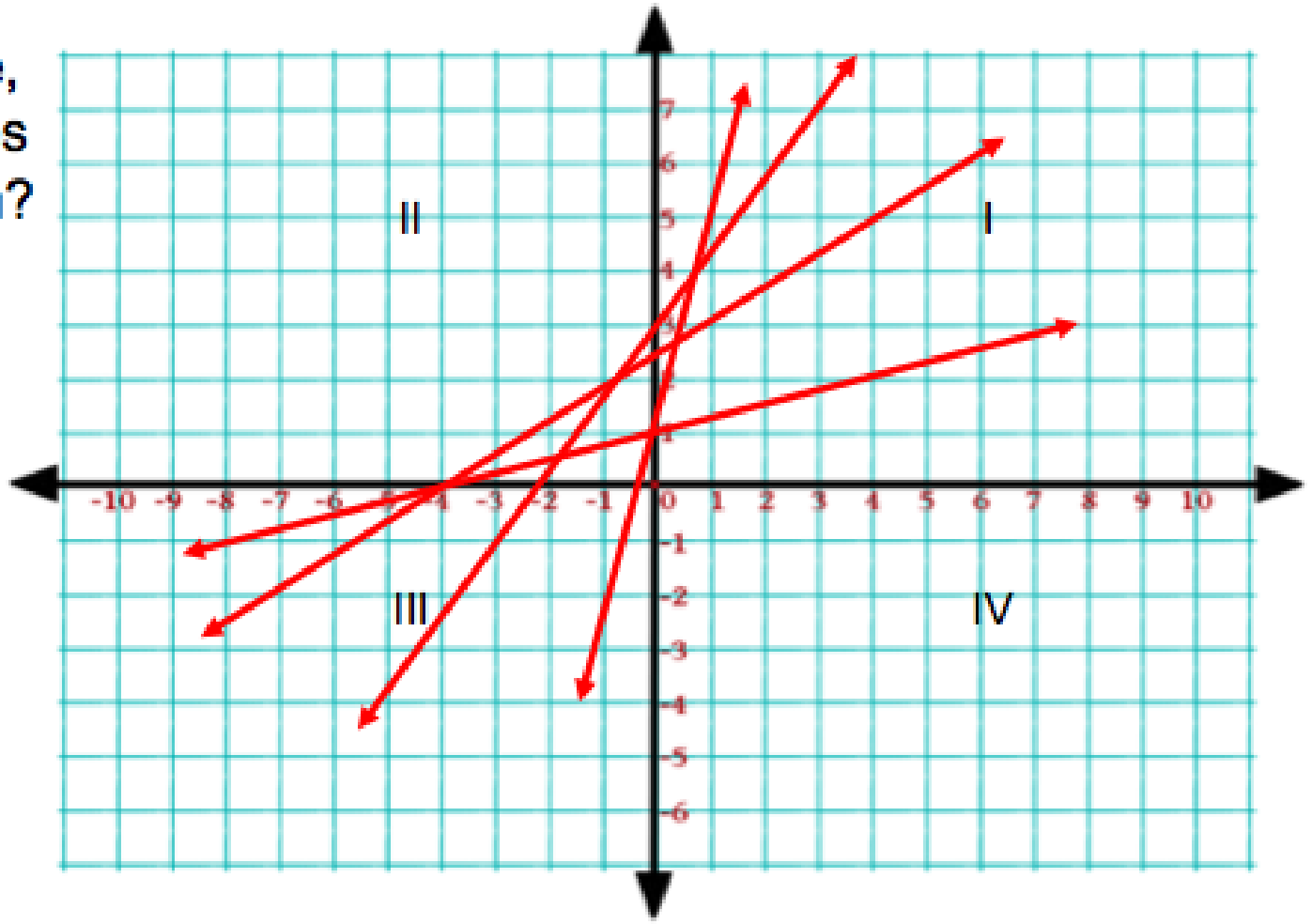
Graph using the slope and y-intercept

7) $y = 4$



8) If an equation for a line has a positive y-intercept and slope, which quadrants does the line pass through?

Review of how the quadrants are numbered.



Answer: Quadrants 1, 2, and 3.