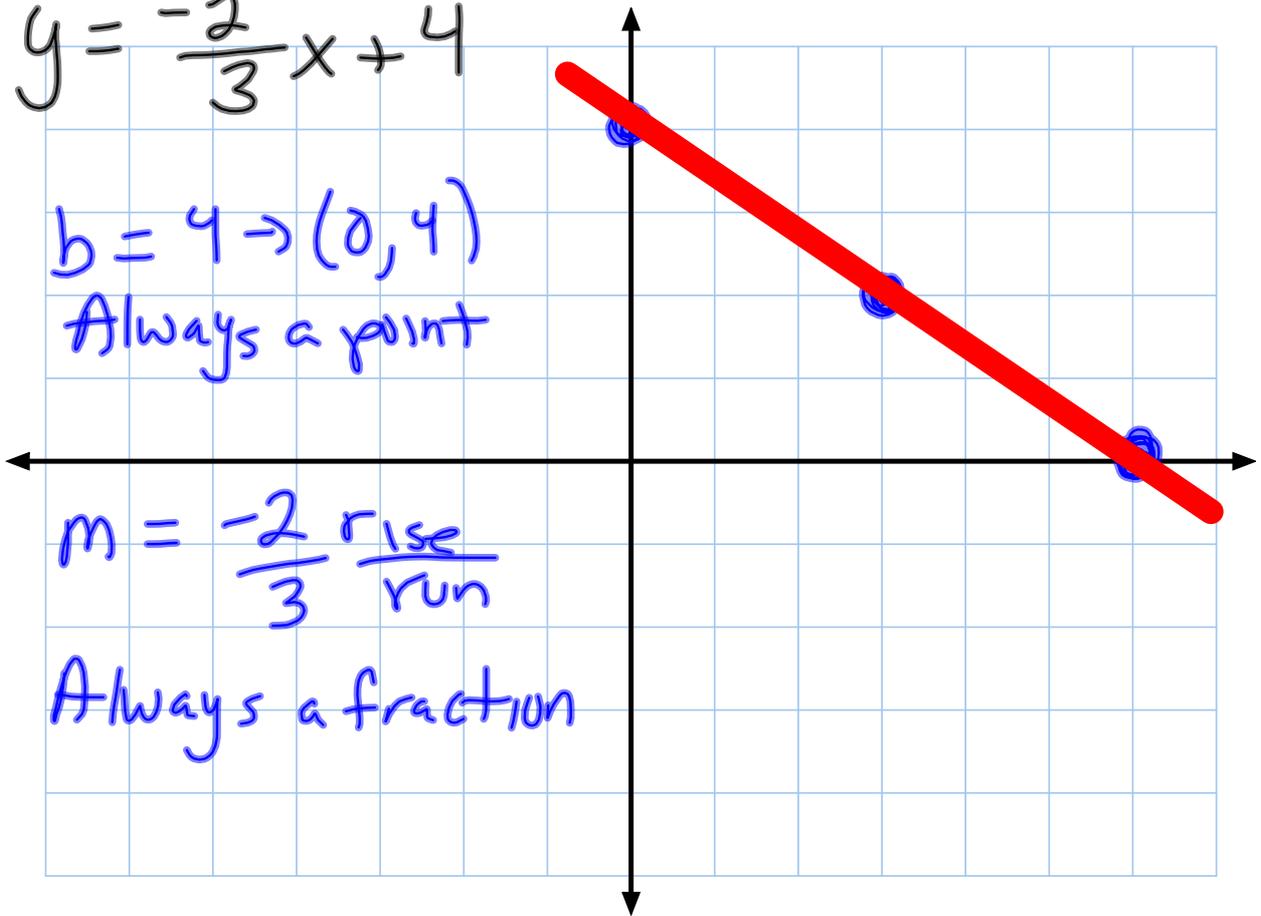


$$y = -\frac{2}{3}x + 4$$

$b = 4 \rightarrow (0, 4)$   
Always a point

$$m = -\frac{2}{3} \frac{\text{rise}}{\text{run}}$$

Always a fraction



## Two forms of Linear Functions

$$y = mx + b$$

Slope - Intercept

$$Ax + By = C$$

Standard form  
Intercept form

$$2x + 3y = 12$$

1) plug  $y = 0$

$$x = 6$$

$x = \text{Int} (6, 0)$

2) plug  $x = 0$

$$y = 4$$

$y = \text{Int} (0, 4)$

$$2x + 3(0) = 12$$

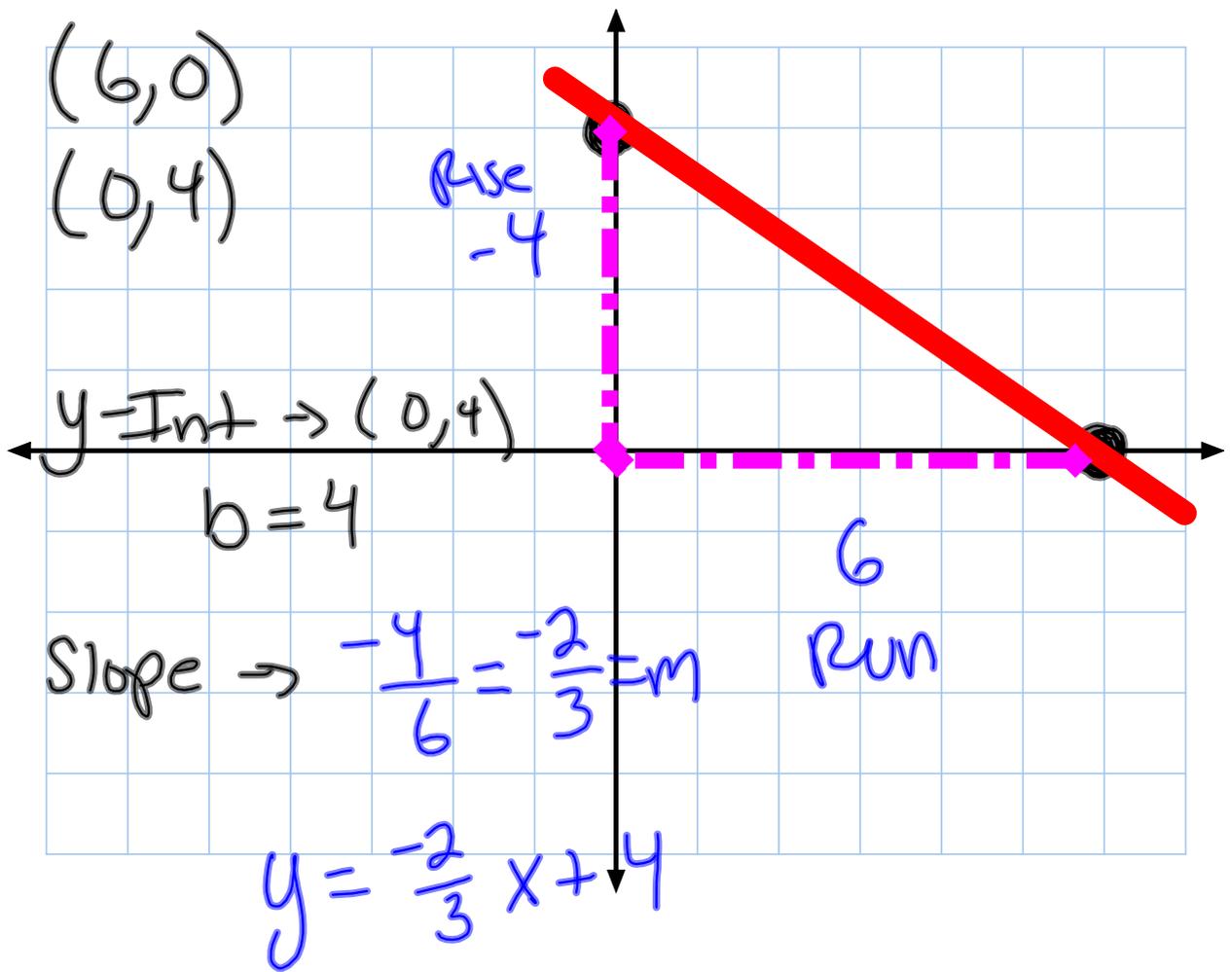
$$\frac{2x}{2} = \frac{12}{2}$$

$$x = 6$$

$$2(0) + 3y = 12$$

$$\frac{3y}{3} = \frac{12}{3}$$

$$y = 4$$



graph

$$-2x + y = 4$$

1)  $y = 0$

$$x = -2$$

$$x\text{-Int} + (-2, 0)$$

$$-2x + 0 = 4$$

$$\frac{-2x}{-2} = \frac{4}{-2}$$

$$x = -2$$

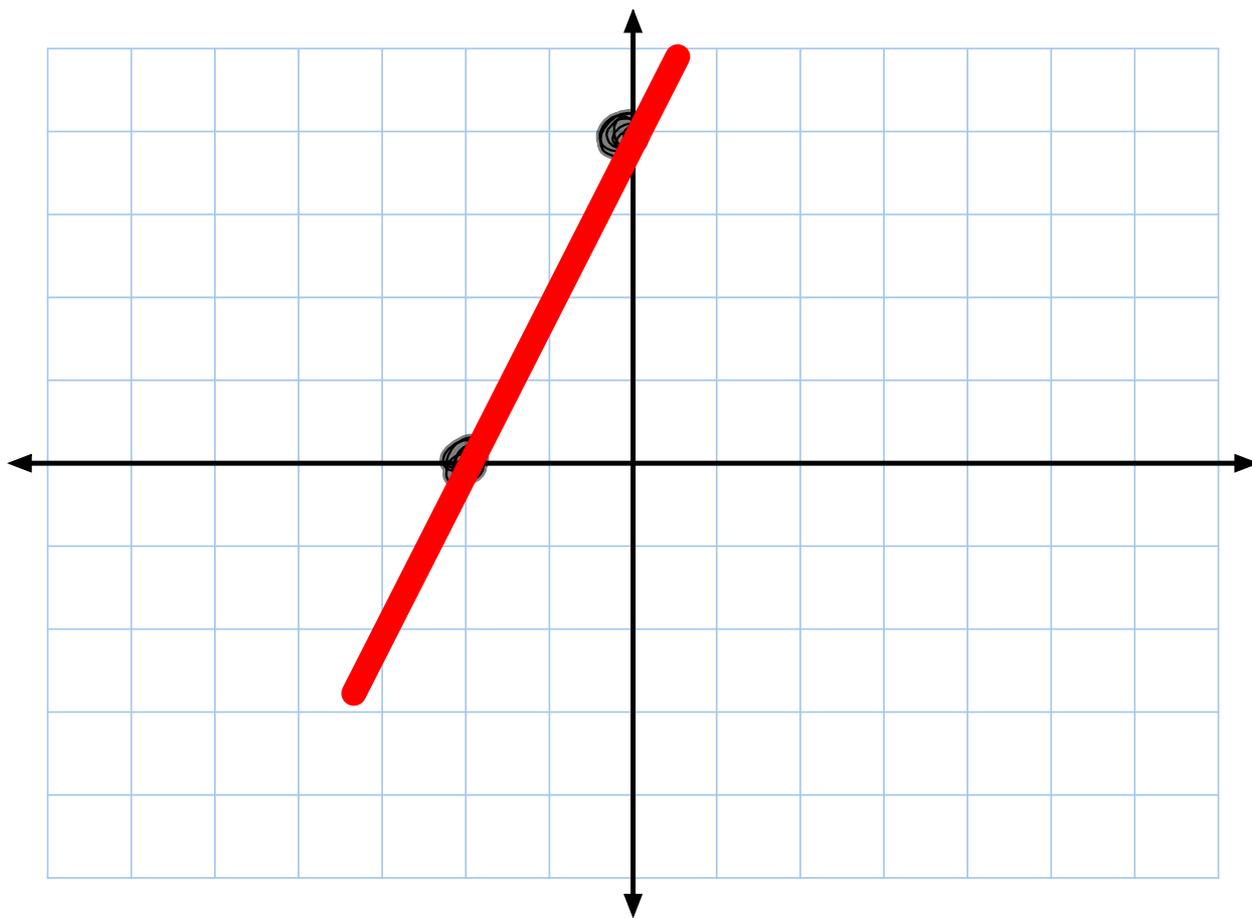
2)  $x = 0$

$$y = 4$$

$$y\text{-Int} + (0, 4)$$

$$-2(0) + y = 4$$

$$y = 4$$



$$5x + 3y = 15$$

$$1) \ y = 0$$

$$x = 3$$

$$(3, 0)$$

$$\frac{5x}{5} = \frac{15}{5}$$

$$x = 3$$

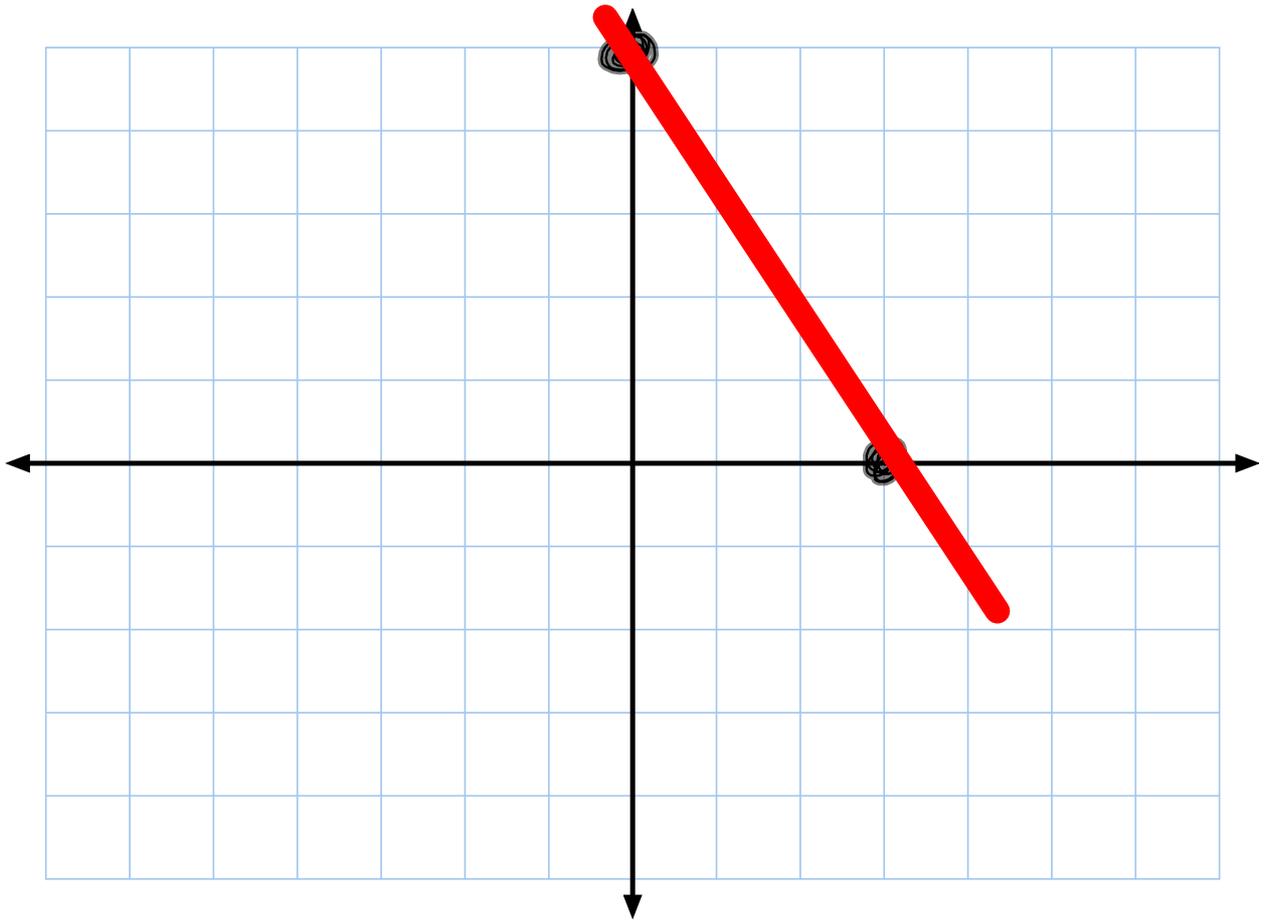
$$2) \ x = 0$$

$$y = 5$$

$$(0, 5)$$

$$\frac{3y}{3} = \frac{15}{3}$$

$$y = 5$$



$$12x - 3y = 6$$

$$1) y = 0$$

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

$$\left(\frac{1}{2}, 0\right)$$

$$\frac{12x}{12} = \frac{6}{12}$$

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

$$2) x = 0$$

$$y = -2$$

$$(0, -2)$$

$$\frac{-3y}{-3} = \frac{6}{-3}$$

$$y = -2$$

$(\frac{1}{2}, 0)$

$(0, -2)$

