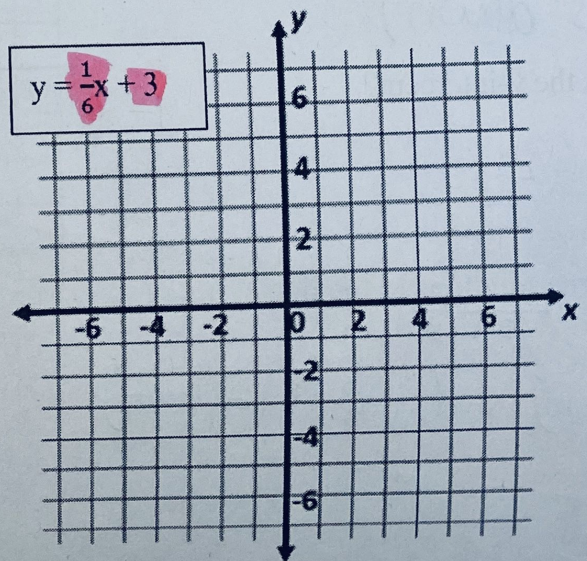
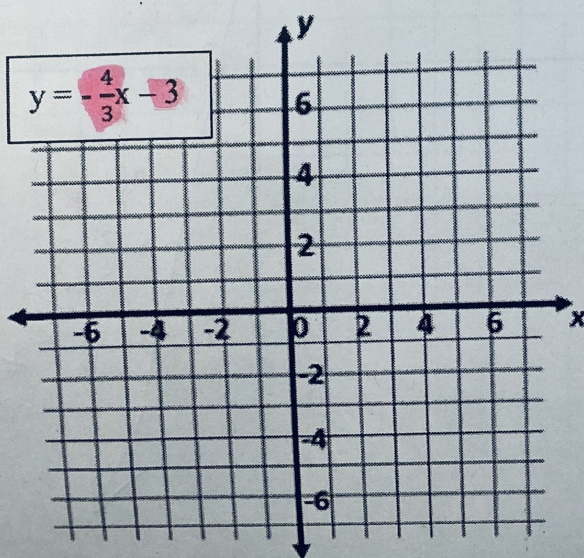
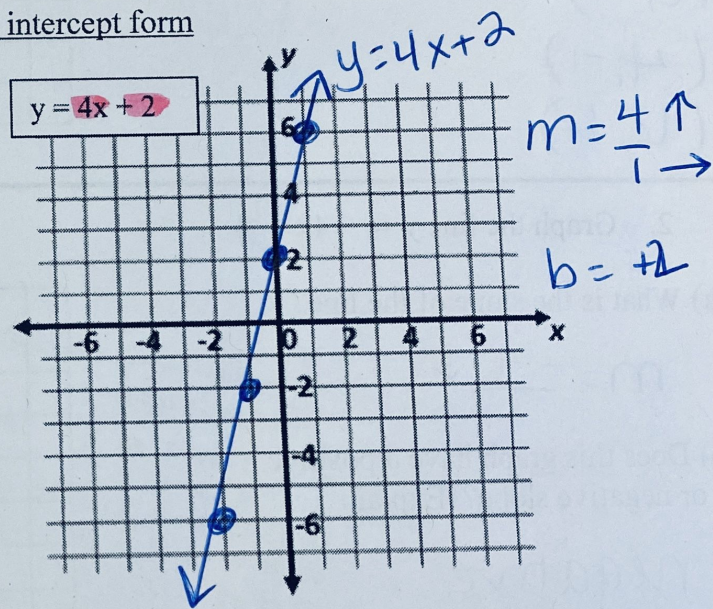
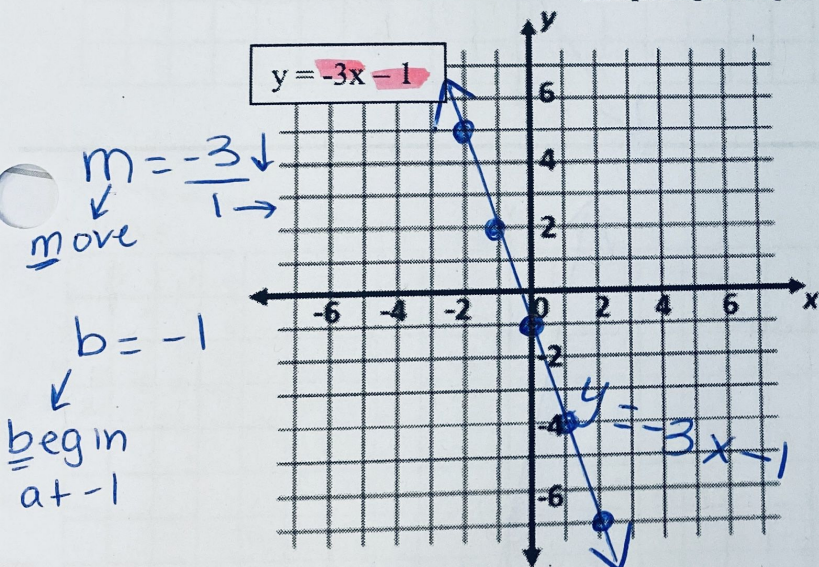


**6-4 Graphing Equations in Slope-Intercept Form****Learning Target:** *I can graph a linear equation using slope-intercept form.*

$$y = mx + b$$

**Warm Up:** Re-write the following equations in slope-intercept form. Then, identify the slope and y-intercept.

<p>(a) <math>\frac{6y}{6} = \frac{3x}{6} + \frac{18}{6}</math></p> <p><math>y = \frac{1}{2}x + 3</math></p> <p><math>m = \frac{1}{2}</math> (up 1, right 2) <math>b = 3</math></p>	<p>(b) <math>4y + 12x = -4</math></p> <p><math>\frac{4y}{4} = \frac{-12x - 4}{4}</math></p> <p><math>y = -3x - 1</math></p> <p><math>m = -3</math> (down 3, right 1) <math>b = -1</math></p>	<p>(c) <math>-5x + 2y = -8</math></p> <p><math>\frac{2y}{2} = \frac{5x - 8}{2}</math></p> <p><math>y = \frac{5}{2}x - 4</math></p> <p><math>m = \frac{5}{2}</math> (up 5, right 2) <math>b = -4</math></p>
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Graphing using slope intercept form

**Problem Set:**

1. Graph the line  $y = \frac{3}{2}x - 7$

(a) What is the slope of the line?

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

↑  
→

(b) Does this graph have a positive or negative slope? Explain

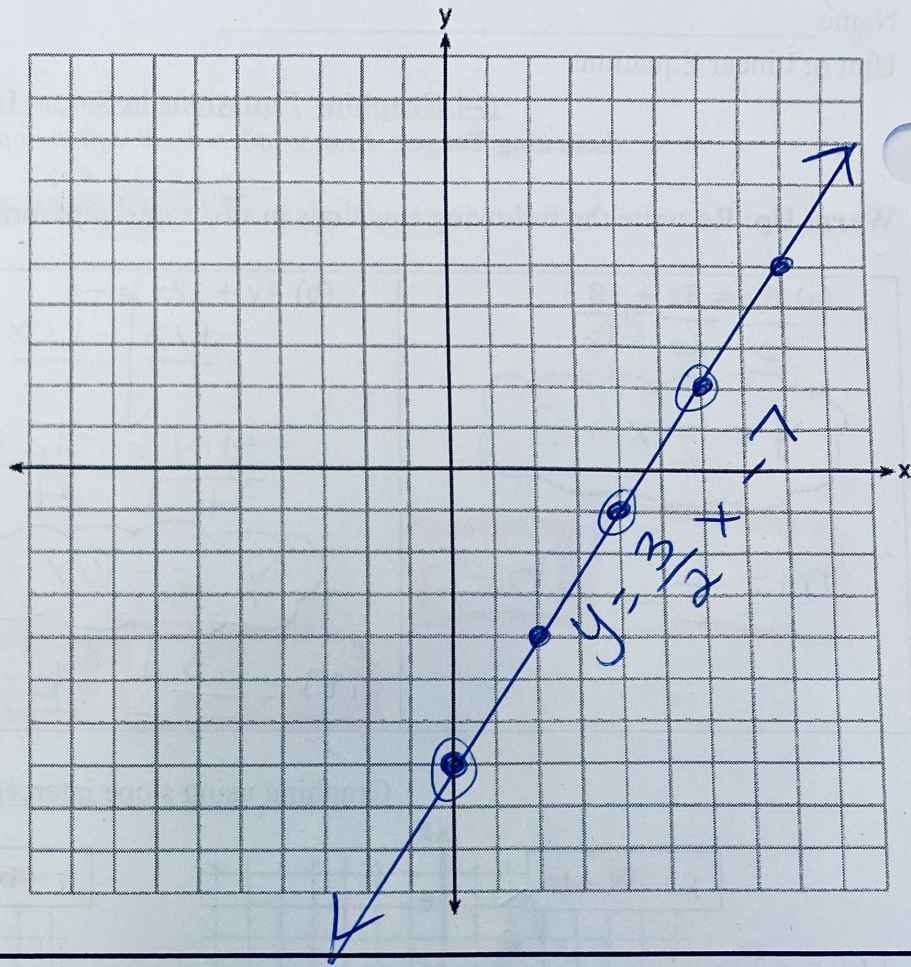
positive  
(goes up!)

(c) What is the y-intercept?

$$b = -7$$

(d) State three solutions to the line  
points

- (0, -7)
- (4, -1)
- (6, 2)



2. Graph the line  $y = -4x + 4$

(a) What is the slope of the line?

$$m = \frac{-4}{1}$$

↓  
→

(b) Does this graph have a positive or negative slope? Explain

negative  
(goes down)

(c) What is the y-intercept?

$$b = 4$$

(d) State three solutions to the line  
points

- (0, 4)
- (1, 0)
- (2, -4)

