Name: KEY

Learning Target 3 – 1: The Three Forms – V1

Learning Target $(L-T)$	Procedural Context

$3-1$
 	
Linear Equations: The Three Forms
	• Slope-Intercept/Standard and General/Point-Slope Form
	  ◦ Solving given particular information
	  ◦ Know which equation is the most appropriate
	• Algebraically Manipulate to achieve the desired form
	• Graphing form a Slope and a Point, Two Points, or Intercepts

Self-Reflection

For this Learning Target I am feeling:

Discuss your work habits leading up to this Check-In:

Your Level of Understanding of this Learning Target is:

My Feedback:

Emerging Level Questions

Convert the following equations to the specified form

1. From Slope-Intercept to General Form

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

$3y = -2x + 12$

$2x + 3y - 12 = 0$

2. From Point-Slope to General Form

$$y + 1 = -\frac{2}{3}(x - 4)$$

$y + 1 = -\frac{2}{3}x + \frac{8}{3}$

$3y + 3 = -2x + 8$

$2x + 3y - 5 = 0$

3. From Point-Slope to Standard Form

$$y - 4 = \frac{3}{4}(x - 1)$$

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

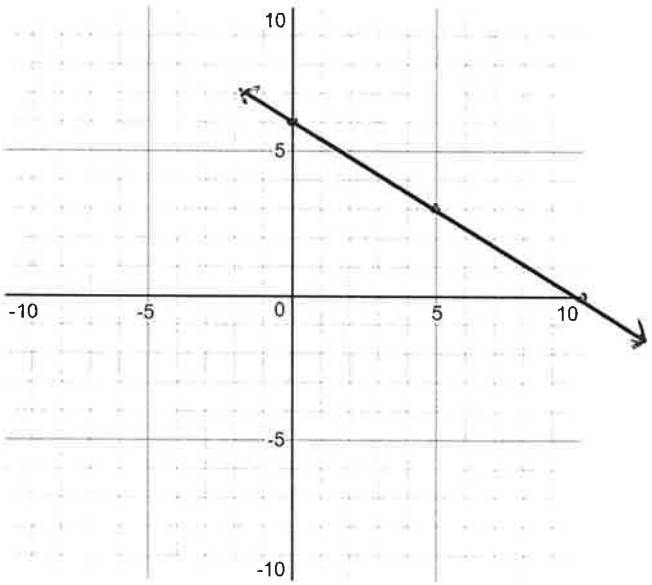
$4y - 16 = 3x - 3$

$3x - 4y + 13 = 0$

$3x - 4y = -13$

4. Graph:

$$y = -\frac{3}{5}x + 6$$



Proficient Level Questions

5. From Point-Slope to General Form

$$y + 1 = -\frac{2}{3}(x - 4)$$

OMIT

6. From Point-Slope to Standard Form

$$y - \frac{2}{3} = -4\left(x + \frac{1}{2}\right)$$

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

$3y - 2 = -12x - 6$

$12x + 3y = -4$

Graph the following

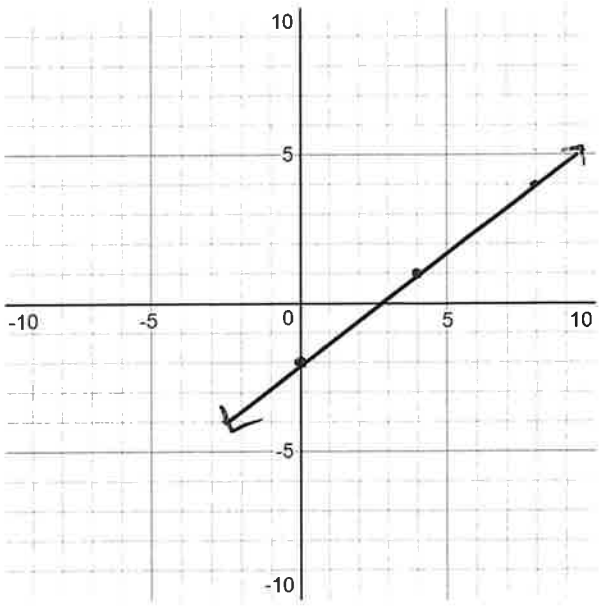
7. The line: $3x - 4y - 8 = 0$

$3x - 4y = 8$

$(0, -2)$

$-4y = -3x + 8$

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



For each pair of equations, determine whether they are parallel, perpendicular, or neither (Show Work)

8. $3x + 2y = 7$ and $4x + 6y = 2$

$2y = -3x + 7$ $\quad 6y = -4x + 2$

$y = -\frac{3}{2}x + \frac{7}{2}$ $\quad y = -\frac{2}{3}x + \frac{1}{3}$

NEITHER

9. $5x - 2y = 4$ and $4x + 10y = 3$

$-2y = -5x + 4$ $\quad 10y = -4x + 3$

$y = \frac{5}{2}x - 2$ $\quad y = -\frac{2}{5}x + \frac{3}{10}$

perp.

Extending Level Questions

10. Write, in Standard Form, the equation of the line that passes through points $(-3, 2)$ and $(7, 7)$.

$\frac{7-2}{7-(-3)} = \frac{5}{10} = \frac{1}{2}$

$y - 7 = \frac{1}{2}(x - 7)$

$y - 7 = \frac{1}{2}x - \frac{7}{2}$

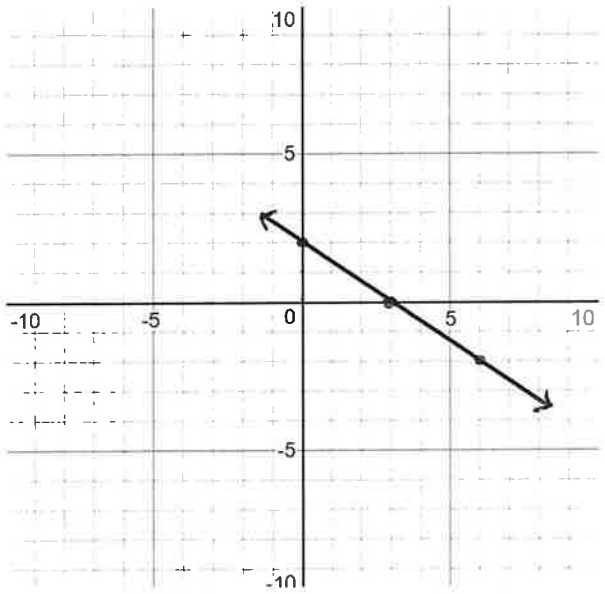
$2y - 14 = x - 7$

$x - 2y = -7$

11. Graph the line: $y - \frac{5}{3} = -\frac{2}{3}\left(x - \frac{1}{2}\right)$

$y - \frac{5}{3} = -\frac{2}{3}x + \frac{1}{3}$

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



12. Write the equation of the line that passes through points $(2, 6)$ and $(2, -7)$

$x = 2$