Today's Plan:

Learning Target (standard): I will graph linear equations using *t*-charts.

Students will: Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work, take notes over new material and complete practice problems over new concepts.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide examples of new concepts and assign students assessment problems over new concepts.

Assessment: Board work, homework check and homework assignment

Differentiation: Students will work at the board, go over and correct homework at their seats, actively engage in lecture over new concepts, practice new concepts with the aid of other students and the teacher and complete homework assignment.

NAME _____ #32

BELL RINGER

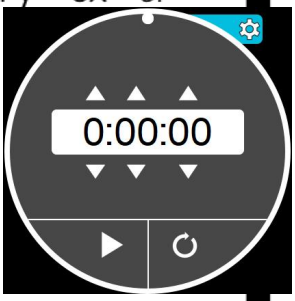
1.) Identify the slope and y-intercept for the equation $y = 5x - 6$.

$y = 5x - 6$ $m = 5$ $I_y: (0, -6)$

$y = mx + b$

2.) Simplify, write your answer in simplest form $\frac{11-2^2}{14}$.

$\frac{11-4}{14} = \frac{7}{14} = \frac{1}{2}$

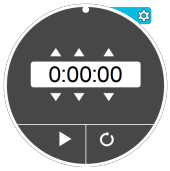


3.) Solve $7(x + 3) = 7x - 8$.

$7x + 21 = 7x - 8$

$21 \neq -8$ no solution

On the back of your bell ringer: Given the following equation, explain in 3 sentences why it is better to have the equation in slope-intercept form than in standard form when creating a t-chart for the equation. Use the slope-intercept form to create the t-chart and then graph the result.



$$-3x - 5y = -10$$
$$+3x \qquad +3x$$

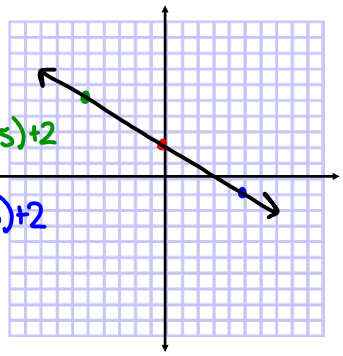
$$\frac{-5y}{-5} = \frac{3x}{-5} - \frac{10}{-5}$$

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

x	y
-5	5
0	2
5	-1

$y = -\frac{3}{5}(-5) + 2$

$y = -\frac{3}{5}(5) + 2$



It is better to have the equation in slope-intercept form than in standard form when graphing using a t-chart because the equation will be solved for the y-variable. The t-chart is easily completed since the denominator of the slope can be used to fill in the three required x-values. And finally, slope-intercept form allows us to determine the y-values from the x-values in one simple step of substitution.

Graph using a *t*-chart.

$$10)\ x + 4y = 4$$
$$-x \qquad -x$$

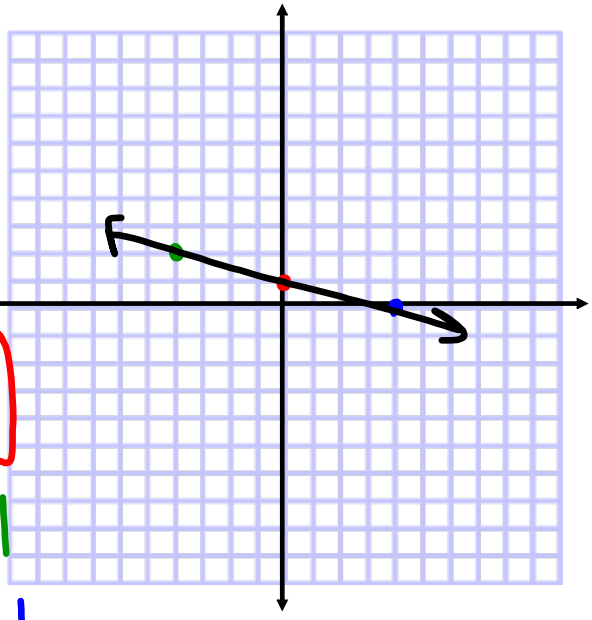
x	y
-4	2
0	1
4	0

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

$$y = -\frac{1}{4}x + 1$$

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

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



Graph using a *t*-chart.

$$-5x+3y=-18$$

$+5x$ $+5x$

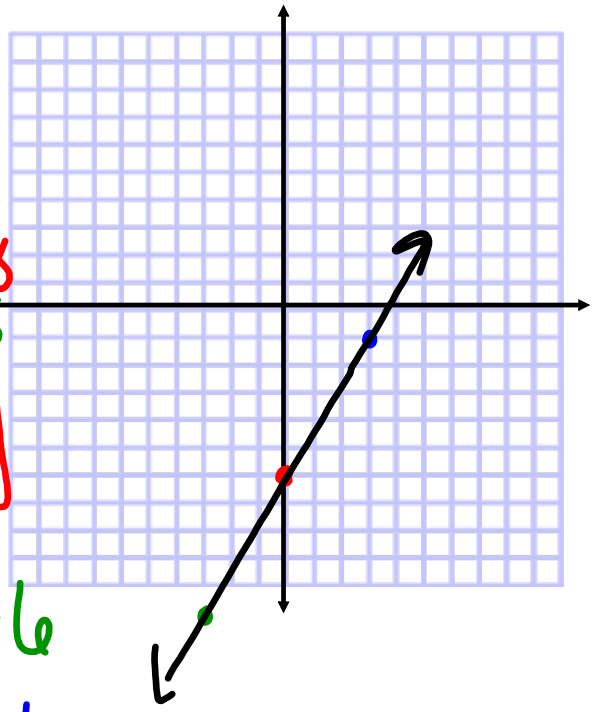
x	y
-3	-11
0	-6
3	-1

$\frac{3y}{3}=\frac{5x}{3}-\frac{18}{3}$

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

$y=\frac{5}{3}(-3)-6$

$y=\frac{5}{3}(3)-6$



Graph using a *t*-chart.

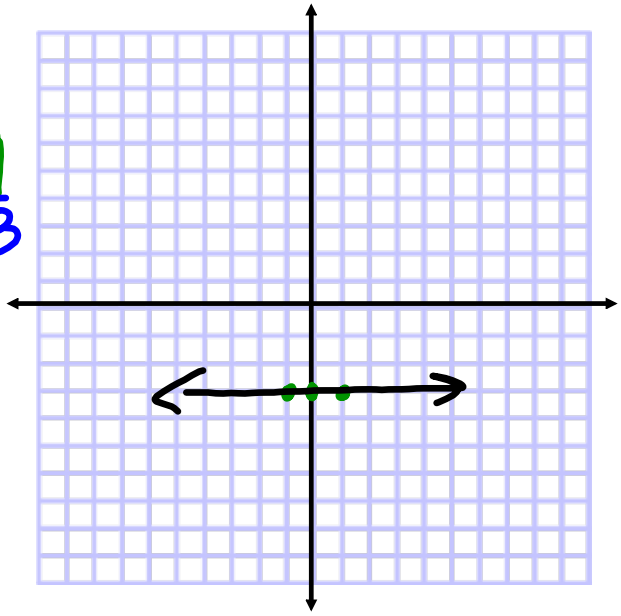
$$-3y-6=3$$

$+6$ $+6$

$\frac{-3y}{-3}=\frac{9}{-3}$

$y=-3$

x	y
-1	-3
0	-3
1	-3



Graph using a *t*-chart.

$$-5y - 4x = 15$$

$+4x \quad +4x$

x	y
-5	1
0	-3
5	-7

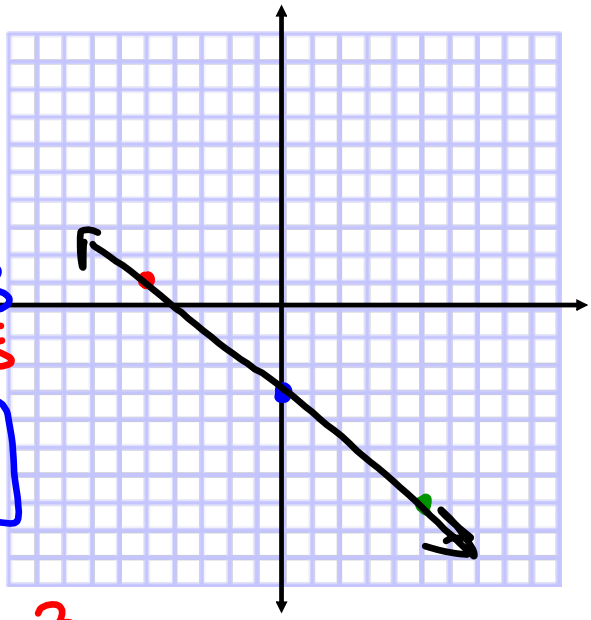
$-5y = 4x + 15$

$\frac{-5y}{-5} = \frac{4x}{-5} + \frac{15}{-5}$

$y = -\frac{4}{5}x - 3$

$y = -\frac{4}{5}(-5) - 3$

$y = -\frac{4}{5}(5) - 3$



Graph using a *t*-chart.

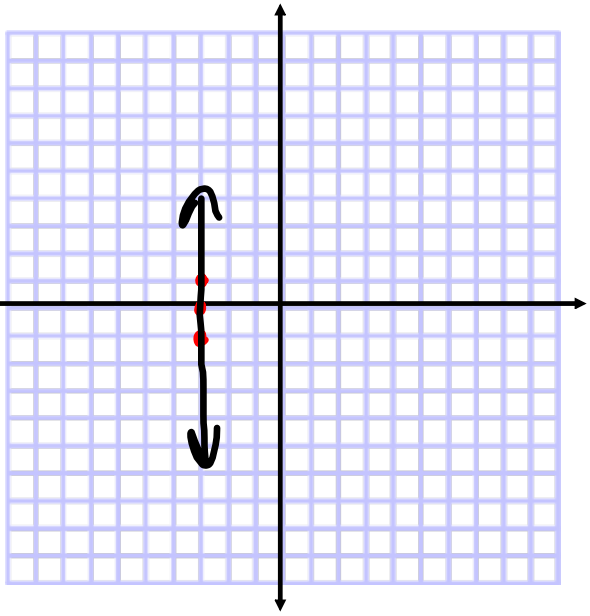
$$6x + 15 = -3$$

$-15 \quad -15$

$6x = -18$

$x = -3$

x	y
-3	-1
-3	0
-3	1



Graphing Linear Equations Assignment

1) On a full sheet of graph paper, draw the x-axis and y-axis in the center of the page to make a coordinate plane.
2) Use the equations below to graph 5 lines. Use a ruler to make sure the lines are straight.
3) Label each line with its equation.
4) Color all areas formed by 3 or more intersecting lines to create a picture. * Make each section a different color *

Graph each line using an appropriate t-chart (you will have 5 t-charts)

$1) -2x+3y=-12$

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

$3) -2x+y=9$

$4) y+2x=9$

$5) 2y=6$

* Erase the x and y-axis after you have graphed all 5 lines. *

Rubric:

Criteria	Points Possible	Points Earned
Lines are graphed correctly	5 (I point each line)	
Neatness (ruler used)	3	
Colored with colored pencils (graphed points can still be seen)	I	
Lines labeled	I	
t-charts are correct	5 (1 point for each)	

* On the back of your paper, explain how this activity can be applied to a real-world situation outside of class *

(5 points)