

Today's Plan:

Learning Target (standard): I will graph linear equations using t-charts, slopes and y-intercepts and intercepts.

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.

p.272 #24-38 even

* Graph using a t-chart *

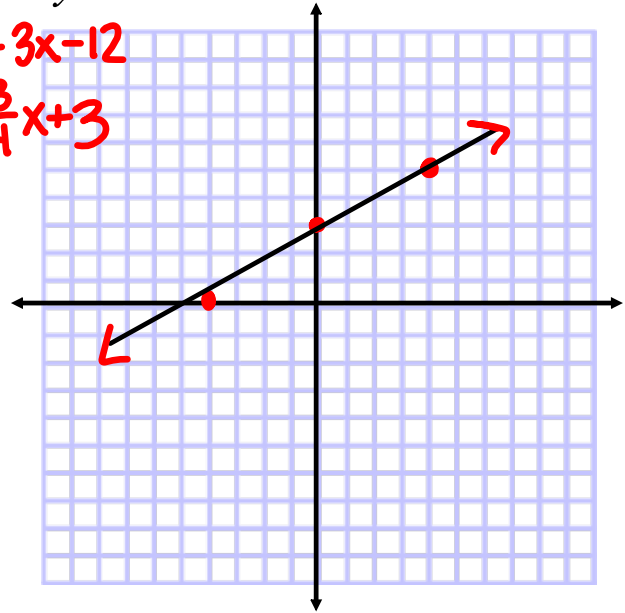
* Go over t-charts and graph with someone at your table! *



Graph using a t -chart: $3x - 4y = -12$

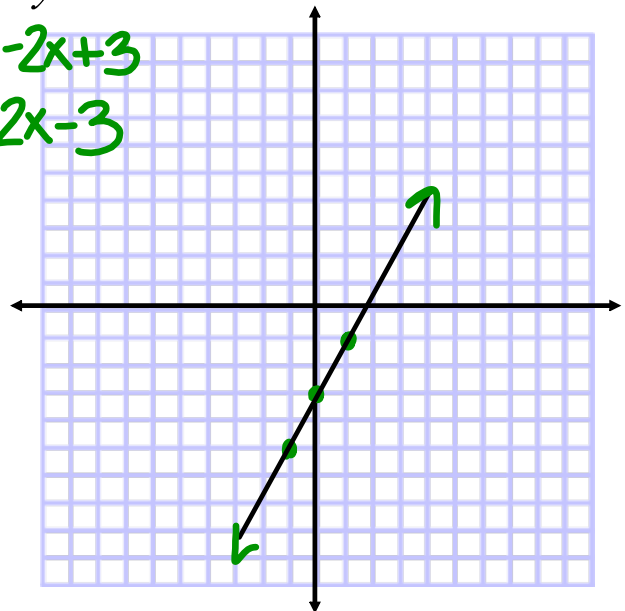
X	Y
-4	0
0	3
4	6

$$\begin{aligned} -4y &= -3x - 12 \\ y &= \frac{3}{4}x + 3 \end{aligned}$$

Graph using a t -chart: $2x - y = 3$

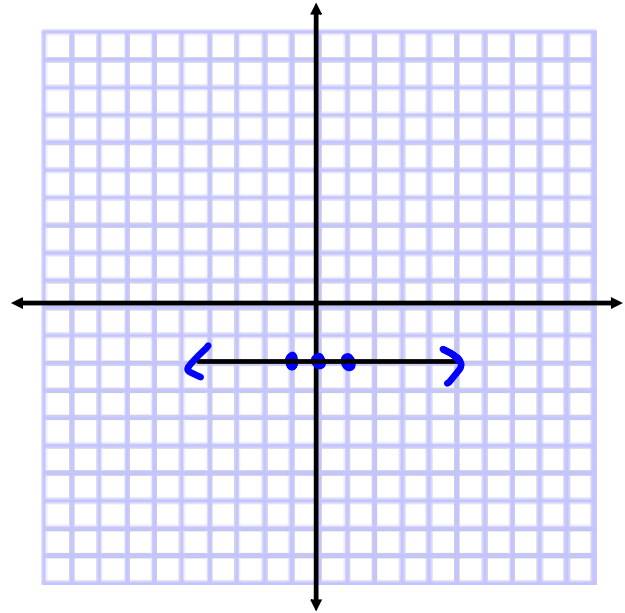
X	Y
-1	-5
0	-3
1	-1

$$\begin{aligned} -y &= -2x + 3 \\ y &= 2x - 3 \end{aligned}$$



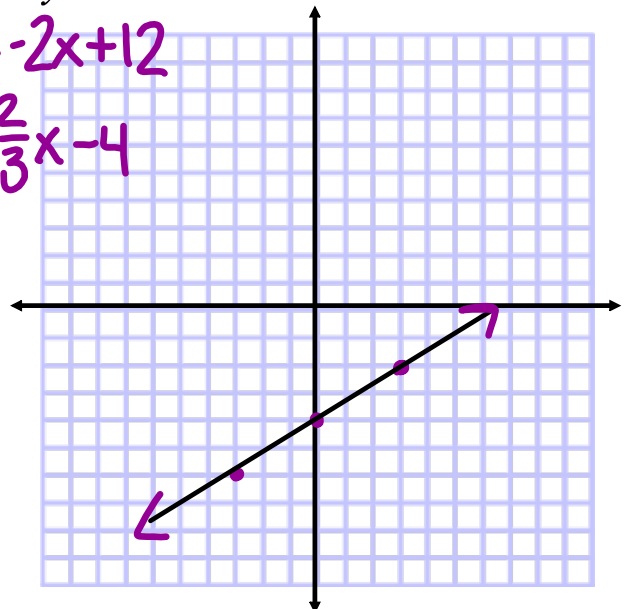
Graph using a t -chart: $y = -2$

X	Y
-1	-2
0	-2
1	-2

Graph using a t -chart: $2x - 3y = 12$

X	Y
-3	-6
0	-4
3	-2

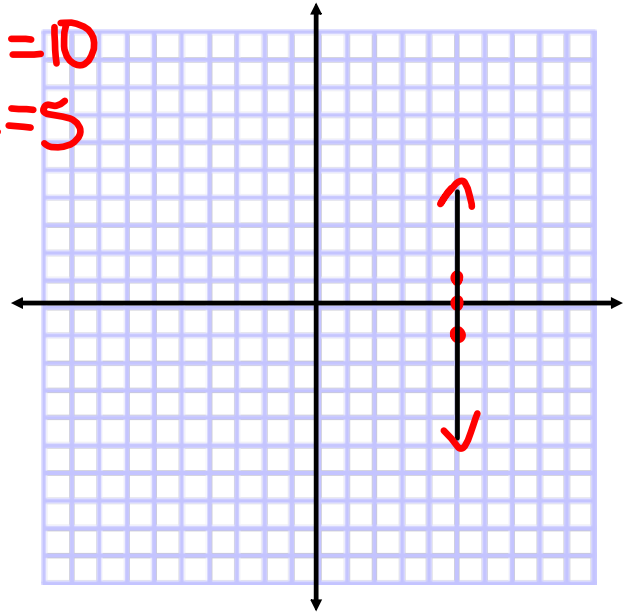
$$\begin{aligned} -3y &= -2x + 12 \\ y &= \frac{2}{3}x - 4 \end{aligned}$$



Graph using a t -chart: $2x - 4 = 6$

X	Y
5	-1
5	0
5	1

$$2x = 10$$
$$x = 5$$



Slope-Intercept Method:

- equation should be in slope-intercept form $y = mx + b$

- if the slope is positive ↗

- if the slope is negative ↘

- if the slope is zero $y = \#$ ↔

- if the slope is undefined $x = \#$ ↑↓

Slope-Intercept Method:

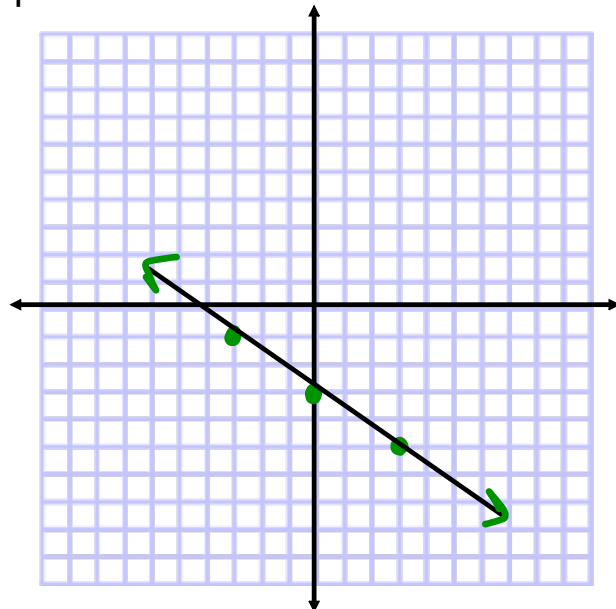
- label the numerical value of the slope $m = \frac{\text{rise}}{\text{run}}$
- determine the y -intercept $I_y : (0, y)$
- plot the y -intercept
- use the y -intercept and the slope to plot a point above and a point below the y -intercept

Graphing using the slope-intercept method:

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

$$m = -\frac{2}{3}$$

$$I_y : (0, -3)$$



Graphing using the slope-intercept method:

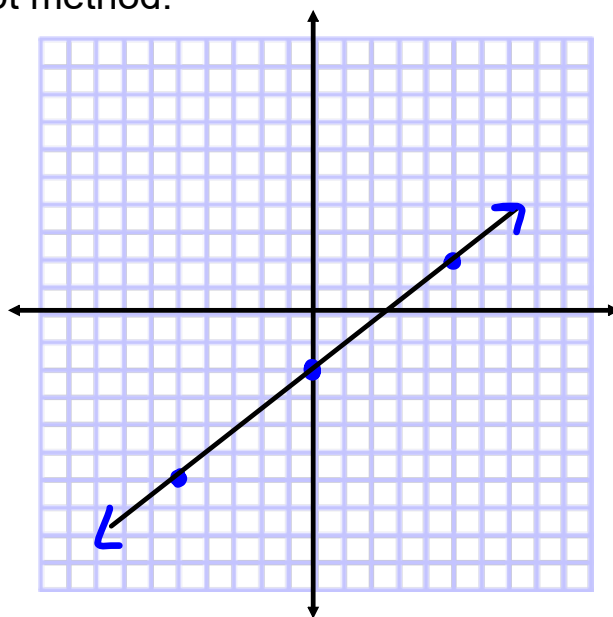
$$4x - 5y = 10$$

$$-5y = -4x + 10$$

$$y = \frac{4}{5}x - 2$$

$$m = \frac{4}{5}$$

$$I_y: (0, -2)$$



Graphing using the slope-intercept method:

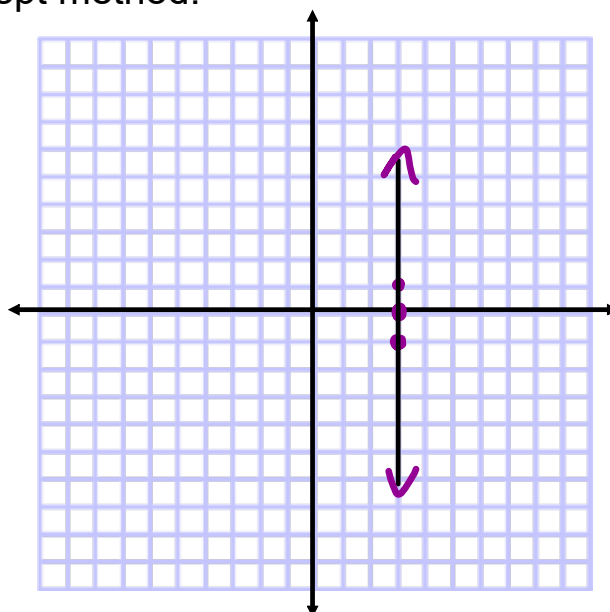
$$4x = 12$$

$$x = 3$$

$$m = \frac{\text{rise}}{\text{run}} = \frac{\#}{0}$$

$$m = \text{und}$$

$$I_x: (3, 0)$$



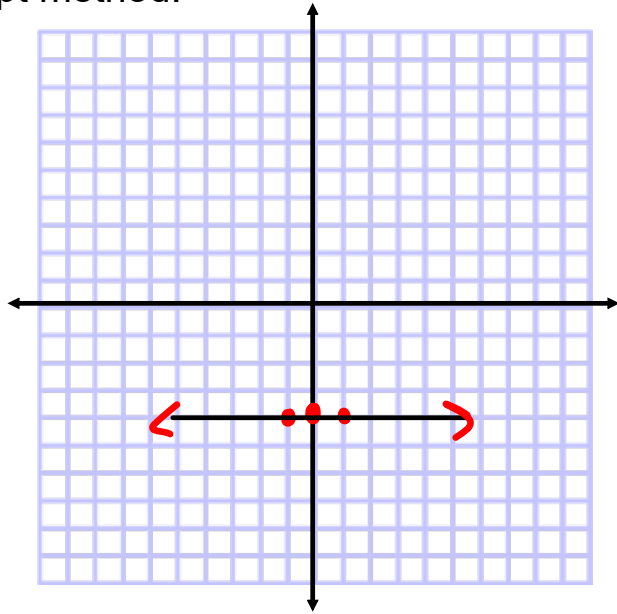
Graphing using the slope-intercept method:

$$y = -4$$

$$m = \frac{\text{rise}}{\text{run}} = \frac{0}{\neq}$$

$$m = 0$$

$$I_y: (0, -4)$$



Intercept Method:

- if the equation is in standard form, leave it in standard form

$$Ax + By = C$$

- find the x-intercept $I_x : (x, 0)$
- find the y-intercept $I_y : (0, y)$

Graph using the intercept method:

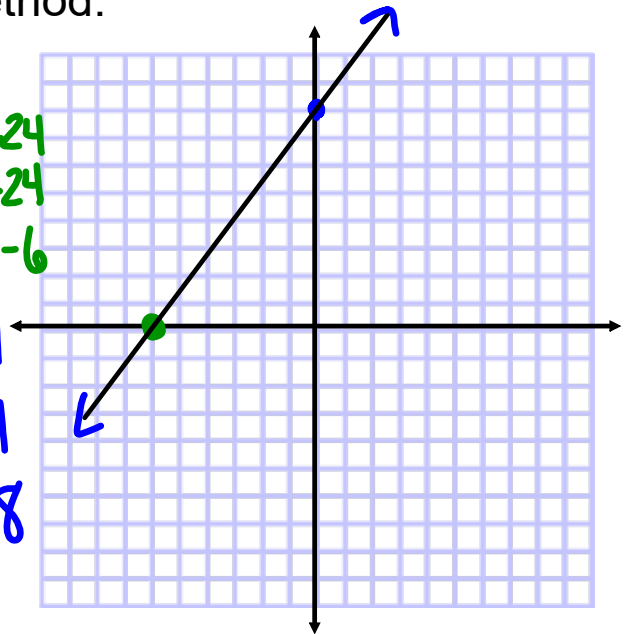
$$-4x + 3y = 24$$

$$I_x: (-6, 0)$$

$$\begin{aligned} -4x + 0 &= 24 \\ -4x &= 24 \\ x &= -6 \end{aligned}$$

$$I_y: (0, 8)$$

$$\begin{aligned} 0 + 3y &= 24 \\ 3y &= 24 \\ y &= 8 \end{aligned}$$



Graph using the intercept method:

$$y = 2x - 8$$

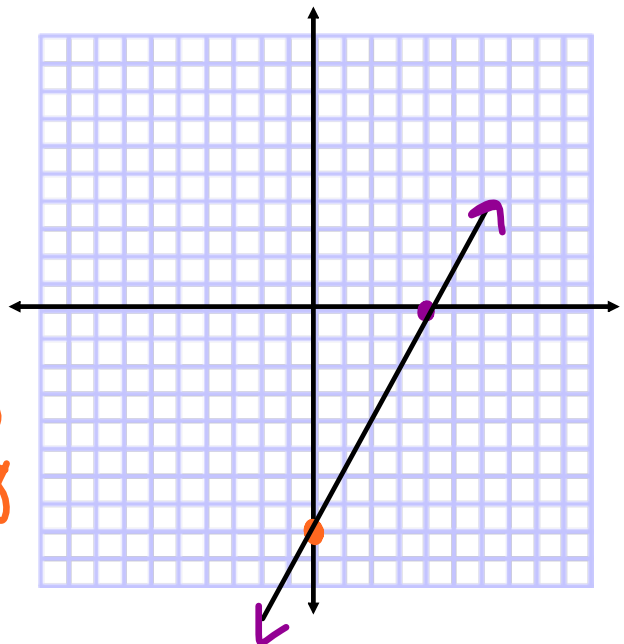
$$-2x + y = -8$$

$$I_x: (4, 0)$$

$$\begin{aligned} -2x &= -8 \\ x &= 4 \end{aligned}$$

$$I_y: (0, -8)$$

$$\begin{aligned} 0 + y &= -8 \\ y &= -8 \end{aligned}$$



Assignment:

p.280 #4-60 (by 4)

* Be sure to graph each using the correct method! *