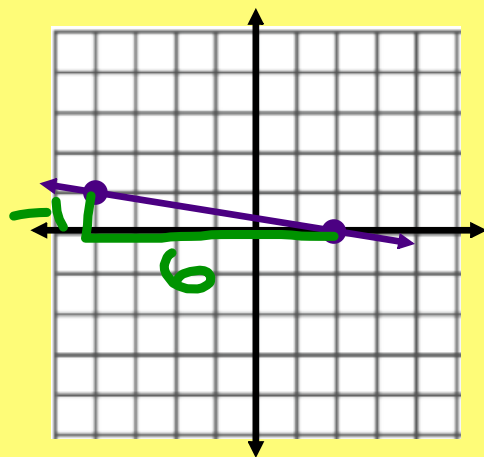
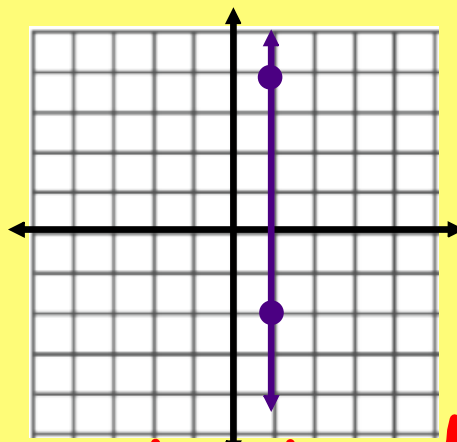


10/22/19 - Warm Up Problem

What is the slope of each line?

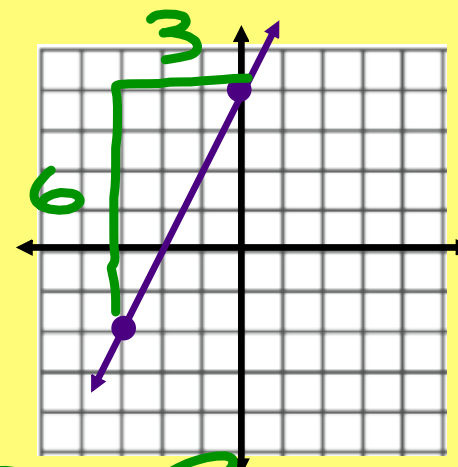


$$-\frac{1}{6}$$



undefined

$$\frac{0}{6}$$



$$\frac{6}{2} = 3$$

Section 3.7 - Graphing Lines

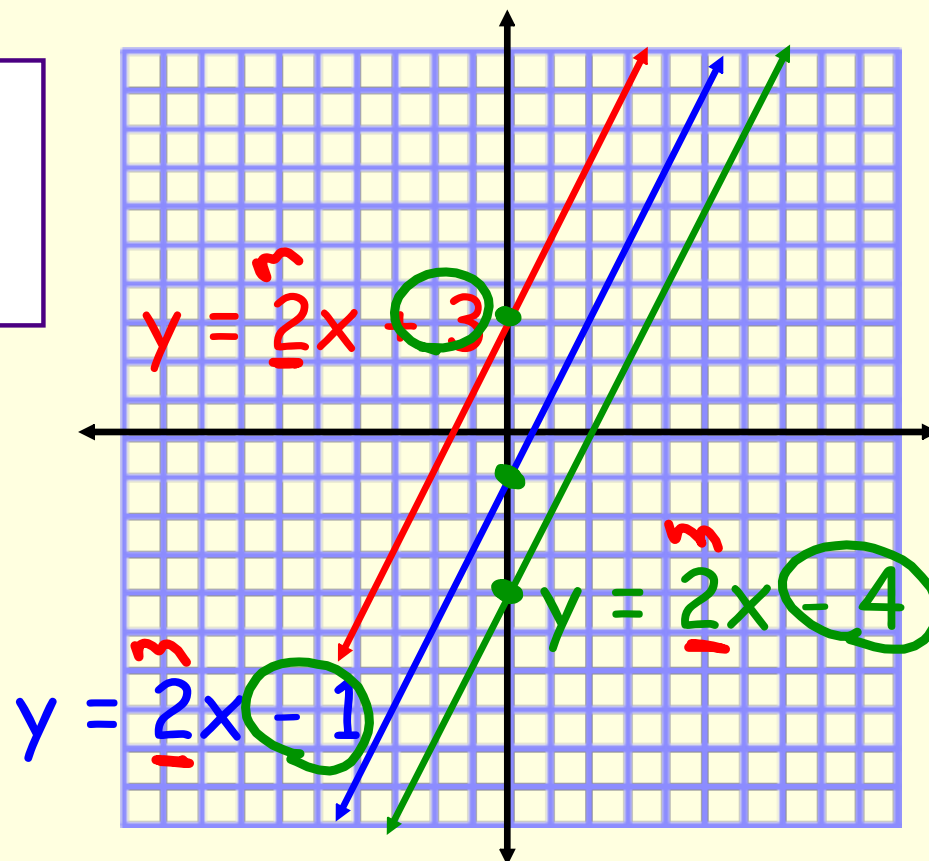
Goal: graph lines in slope-intercept and point-slope form

Slope-Intercept Form

$$y = \underline{m}x + \underline{b}$$

m = slope

b = y-intercept



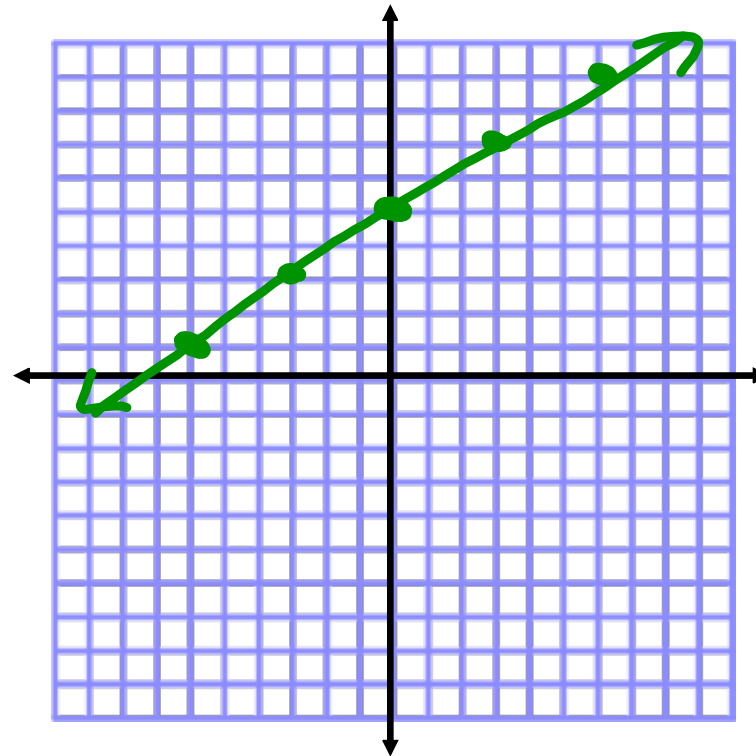
Graphing Linear Equations in Slope-Intercept Form

- Identify the y-intercept and plot on y-axis
- Identify the slope
- Use rise/run to find more points on the line

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

Handwritten annotations for the equation $y = \frac{2}{3}x + 5$:

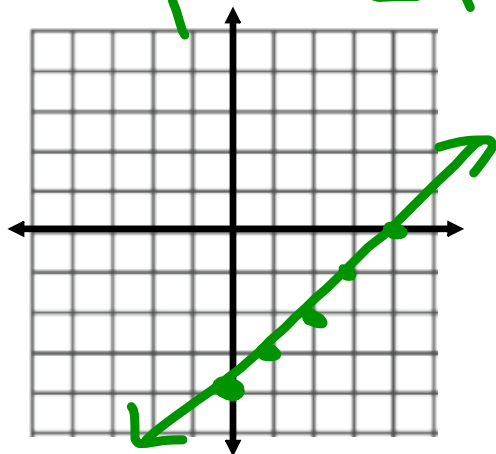
- The numerator 2 is labeled "rise" with a green arrow pointing up.
- The denominator 3 is labeled "run" with a green arrow pointing right.
- The constant term 5 is labeled "y-int" with a green arrow pointing up to the 5 .



Graph the equation.

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

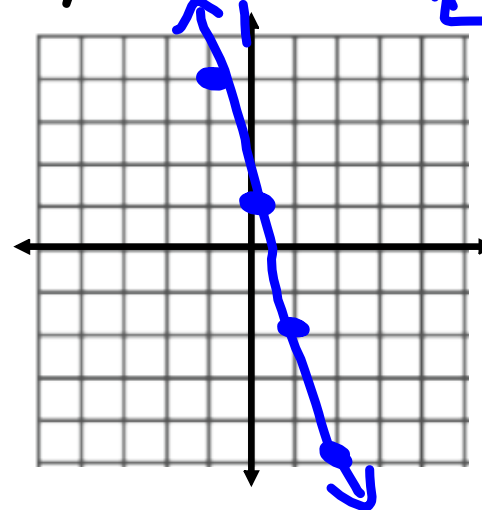
Handwritten notes: A green bracket under the denominator '1' and another green bracket under the constant term '-4' with the label 'y-int'.



Do this one in your notes.

$$y = -3x + 1$$

Handwritten notes: A blue bracket under the coefficient '-3' and another blue bracket under the constant term '+1' with the label 'y-int'.



Other Forms of Linear Equations

Point-Slope Form

$$y - \underline{y_1} = \underline{m}(x - \underline{x_1})$$

$m =$ slope

$(x_1, y_1) =$ coordinates
of a point
(opposite sign)

$$y - \underline{5} = 2(x - \underline{3})$$

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

$$(3, 5)$$

$$y - \underline{2} = -\frac{2}{3}(x - \underline{-7})$$

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

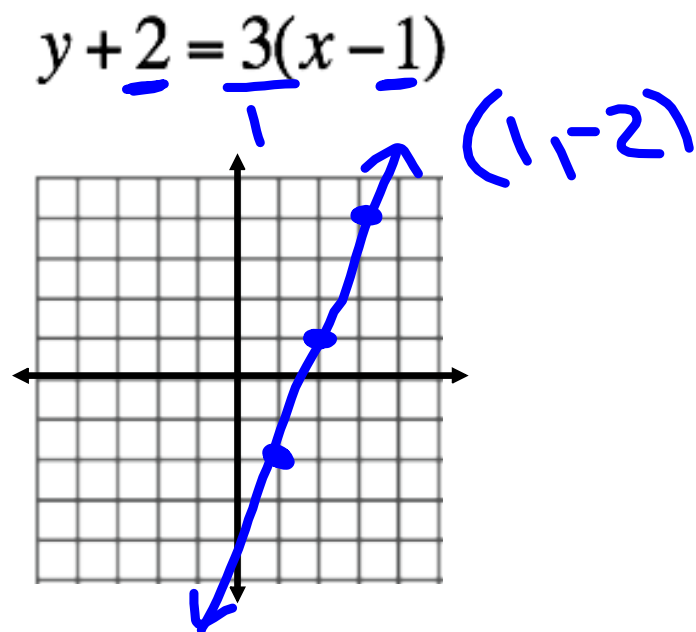
$$(-7, 2)$$

$$y - \underline{-3} = \frac{1}{2}(x - \underline{-6})$$

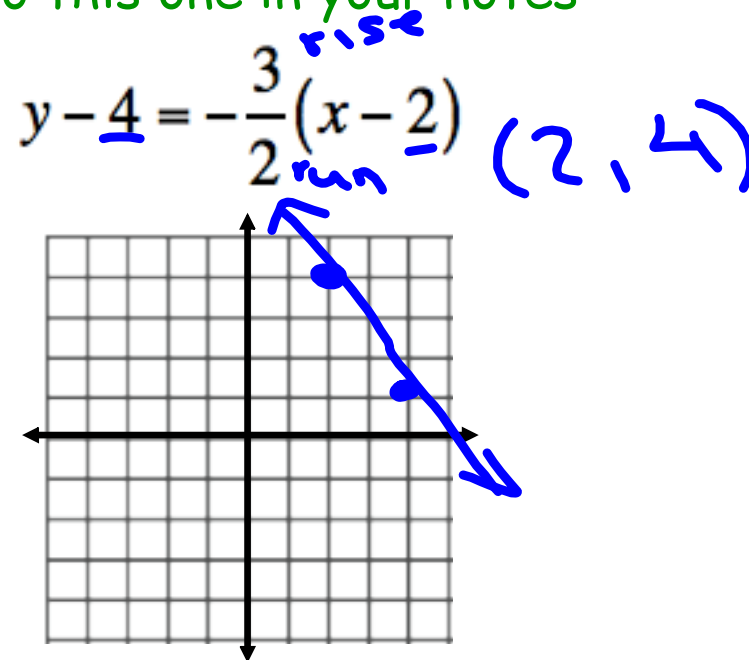
$$m = \frac{1}{2}$$

$$(-6, -3)$$

Graphing in Point-Slope Form



Do this one in your notes

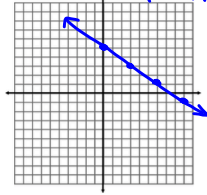


Assignment:
Concept 8 Worksheet
(#8-19)

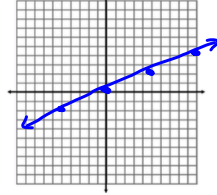
GRAPHING LINEAR EQUATIONS

Graph each equation. These equations are in slope-intercept form.

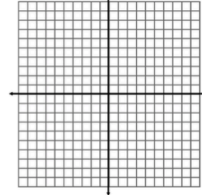
8. $y = -\frac{2}{3}x + 5$
2y = 10x



9. $y = \frac{2}{5}x + 0$

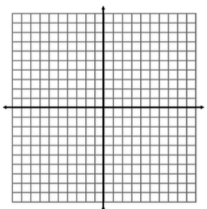


10. $y = -\frac{1}{3}x + 3$

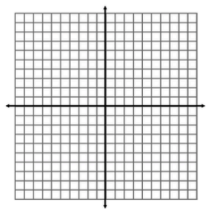


Graph each equation. These equations are in slope-intercept form.

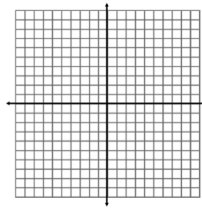
11. $y = 3x + 2$



12. $y = -2x + 6$

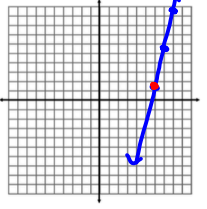


13. $y = -x$

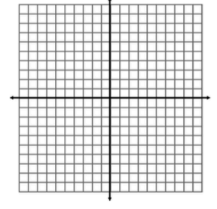


Graph each equation. These equations are in point-slope form.

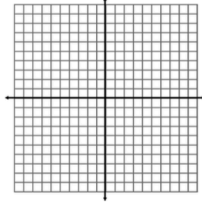
14. $y - 1 = 4(x - 6)$
(6, 1)



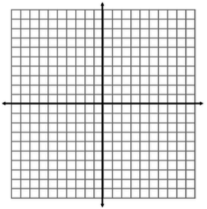
15. $y + 2 = \frac{1}{2}(x - 4)$



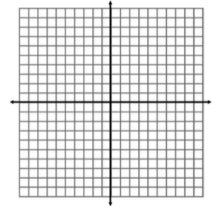
16. $y + 6 = -\frac{1}{4}(x - 5)$



17. $y = -2(x - 5)$



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



19. $y - 5 = (x + 5)$

