

Warm Up

Solve for the unknown variable.

$$1. \frac{5x}{5} = \frac{-15}{5} \quad \boxed{X = -3}$$

$$2. \widehat{5(x-2)} = 4x + 10 + x$$

$$\begin{array}{r} 5x - 10 = 5x + 10 \\ \underline{-5x \quad -5x} \\ -10 = 10 \end{array} \quad \boxed{\text{No Solution}}$$

$$3. \widehat{4x+5} - \widehat{2x+1} = 40$$

$$\begin{array}{r} 2x + 6 = 40 \\ \underline{-6 \quad -6} \end{array} \quad \begin{array}{r} 2x = 34 \\ \underline{2 \quad 2} \\ \boxed{X = 17} \end{array}$$

$$4. \widehat{3(x-9)} = 27$$

$$\begin{array}{r} 3x - 27 = 27 \\ \underline{+27 \quad +27} \\ 3x = 54 \\ \underline{3 \quad 3} \end{array} \quad \boxed{X = 18}$$

$$5. \widehat{2(2x+1)} = \widehat{3(x-4)} + 10$$

$$\begin{array}{r} 4x + 2 = 3x - 12 + 10 \\ 4x + 2 = 3x - 2 \\ \underline{-3x \quad -3x} \\ x + 2 = -2 \\ \underline{-2 \quad -2} \\ \boxed{X = -4} \end{array}$$

Graphing Linear Equations (Part 1)

Linear Equation- Creates a straight line

Slope-Intercept Form-

$$y = mx + b$$

Slope (Rate of Change)-

$M = \frac{\text{rise}}{\text{run}}$ If positive go up
 If negative go down
 Always CHOOSE THE RIGHT!

Y-Intercept-

b where the line crosses the y-axis

Horizontal Line-



Vertical Line-



Horizontal and Vertical Lines:

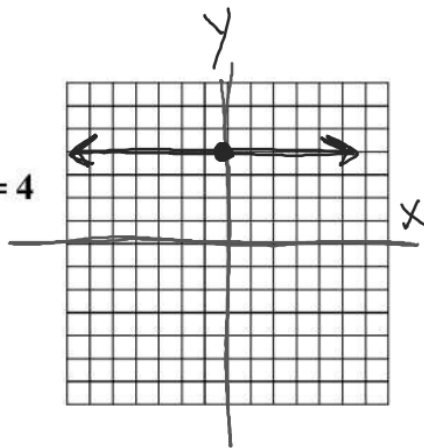
$y = \text{a number}$
 (no x!)

$x = \text{a number}$
 (no y!)

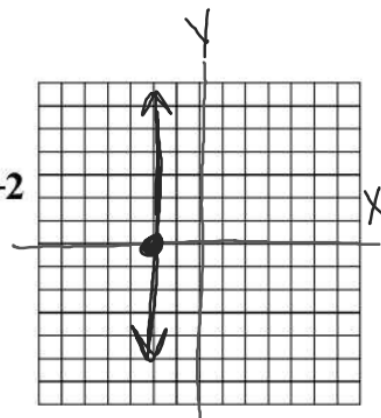
How to graph them:

Ex 1:

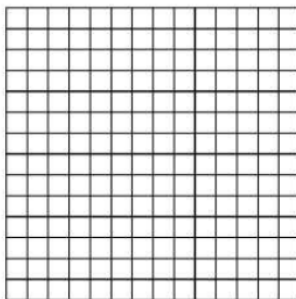
A. $y = 4$



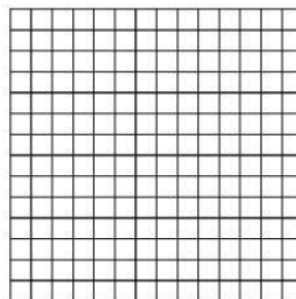
B. $x = -2$



C. $x = 7$



D. $y = -3$



	Slope	y-intercept
Horizontal	0	whatever y =
Vertical	undefined	D.N.E. Does not exist

Ex 2: Go back to Example 1 and determine the slope and y-intercept of each graph.

Ex 3: Identify the slope and y-intercept from each equation.

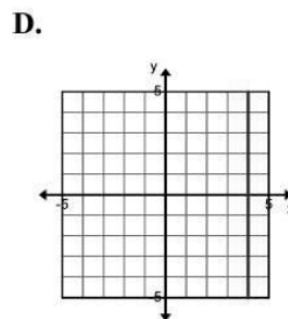
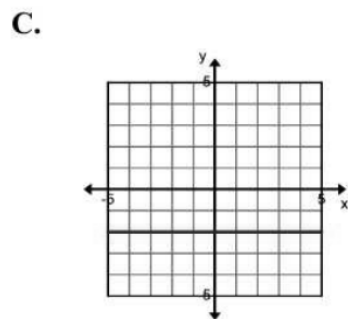
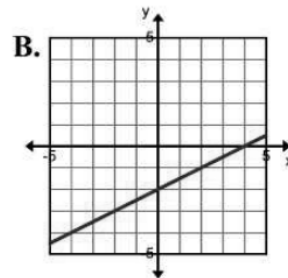
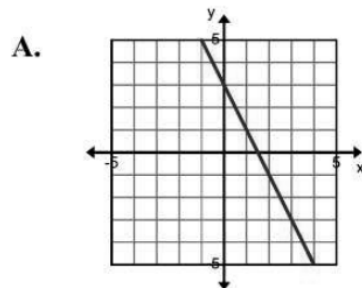
A. $y = -3x + 4$

B. $y = \frac{3}{4}x + 11$

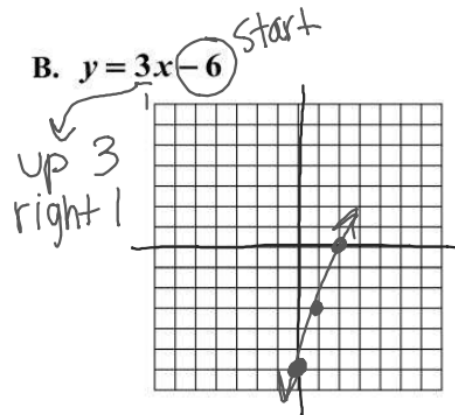
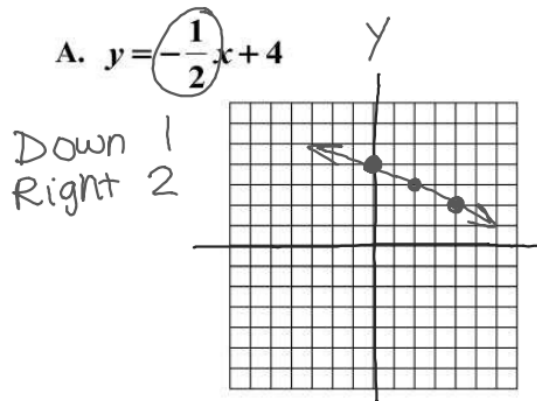
C. $y = -5x$

D. $y = x$

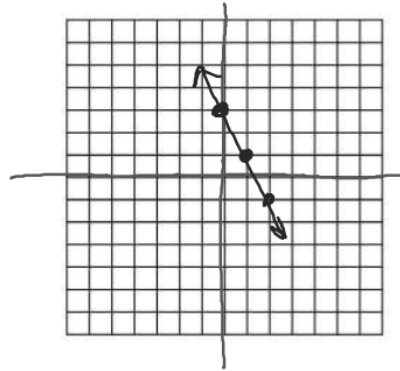
Ex 4: Identify the slope & y-intercept from the graph.



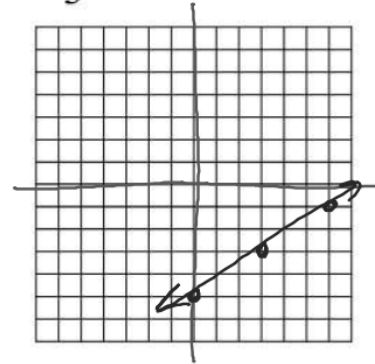
Ex 5: Graph each equation.



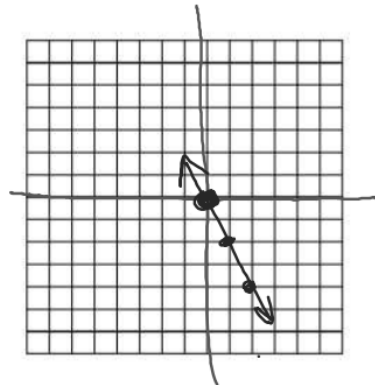
C. $y = -2x + 3$



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



E. $y = -2x + 0$



F. $y = (x + 0)$ $(x = \frac{1}{1}x)$

