

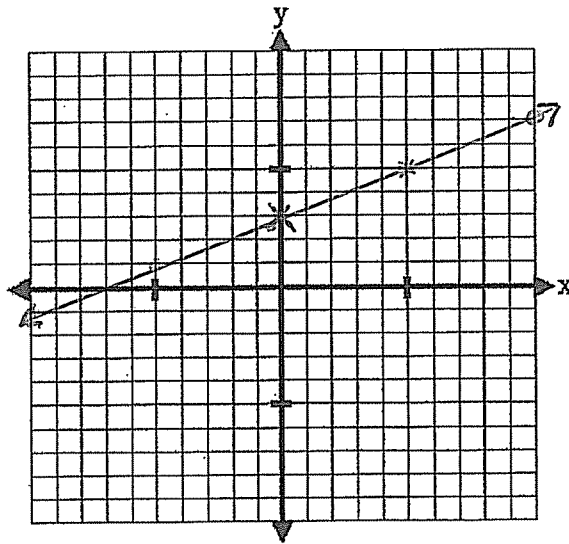
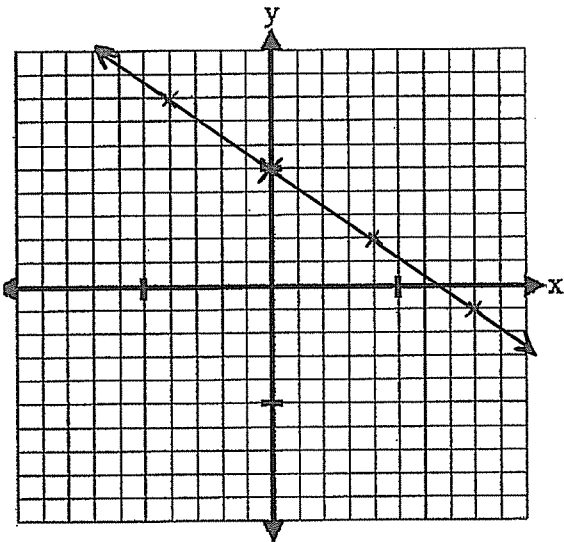
Step 1: For the following equations, manipulate the terms to get "y" on one side of the equation by itself. Think in terms of getting 0's and 1's for coefficients.

Step 2: Identify the slope and y-intercept.

Step 3: Graph

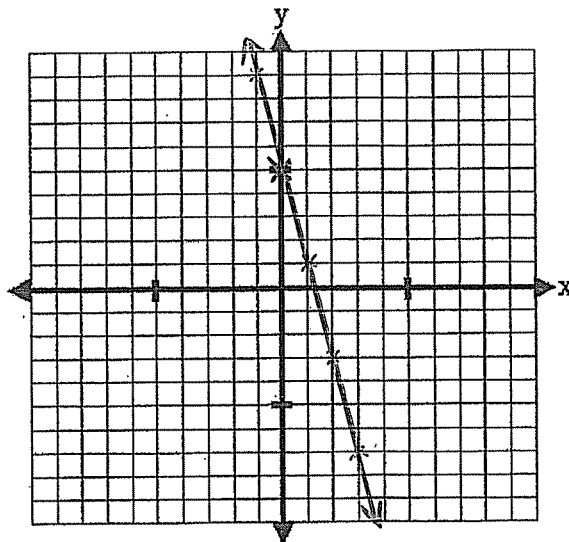
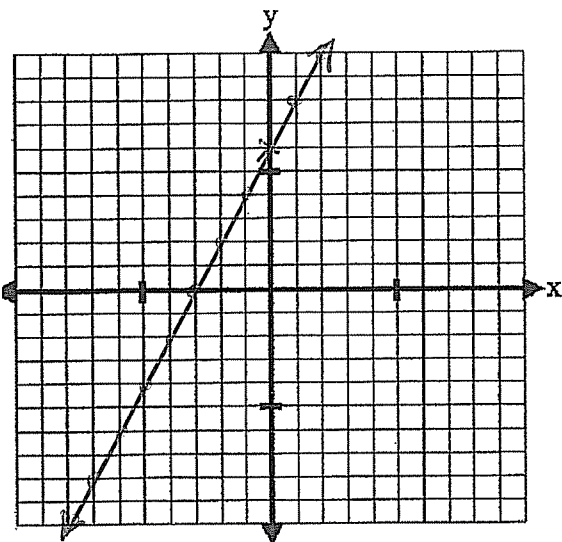
1. $3x + 4y = 20$ STEP 1 SOLVE FOR $y!$
 $\frac{-3x}{-3x} \quad \frac{-3x}{-3x}$
 $\frac{4y}{4} = \frac{-3x + 20}{4}$ (NOT LIKE TERMS!)
 $y = -\frac{3}{4}x + 5$
 Slope = $-\frac{3}{4}$ Y-Intercept = $(0, 5)$

2. $-2x + 5y = 15$ $y = \frac{2}{5}x + 3$
 $\frac{+2x}{+2x} \quad \frac{+2x}{+2x}$
 $\frac{5y}{5} = \frac{2x + 15}{5}$
 Slope = $\frac{2}{5}$ Y-Intercept = $(0, 3)$



3. $6x - 3y = -18$ $y = 2x + 6$
 $\frac{-6x}{-6x} \quad \frac{-6x}{-6x}$
 $\frac{-3y}{-3} = \frac{-6x - 18}{-3}$
 Slope = $\frac{2}{1}$ Y-Intercept = $(0, 6)$

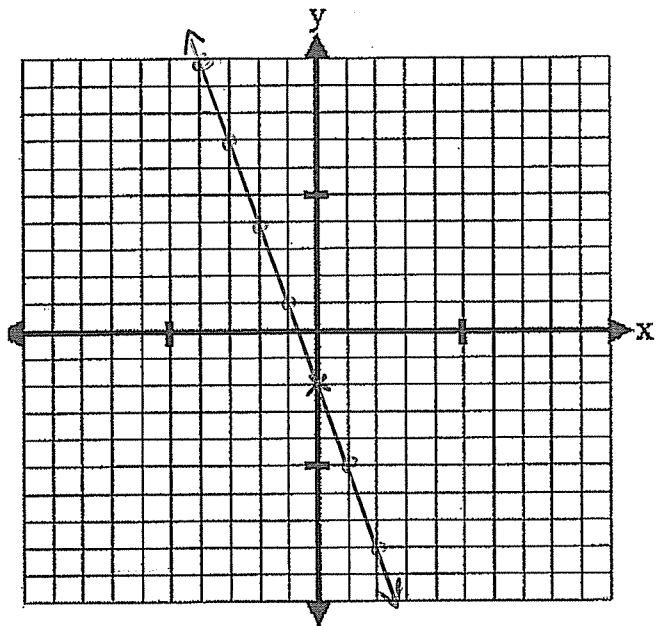
4. $-8x - 2y = -10$ $y = -4x + 5$
 $\frac{+8x}{+8x} \quad \frac{+8x}{+8x}$
 $\frac{-2y}{-2} = \frac{8x - 10}{-2}$
 Slope = $-\frac{4}{1}$ Y-Intercept = $(0, 5)$



$$5. \quad 12x + 4y = -8$$

$$\begin{array}{r} -12x \\ \hline 4y = -12x - 8 \\ \hline \frac{4y}{4} = \frac{-12x}{4} - \frac{8}{4} \end{array} \quad y = -\frac{3}{1}x - 2$$

Slope = $-\frac{3}{1}$ Y-Intercept = $(0, -2)$

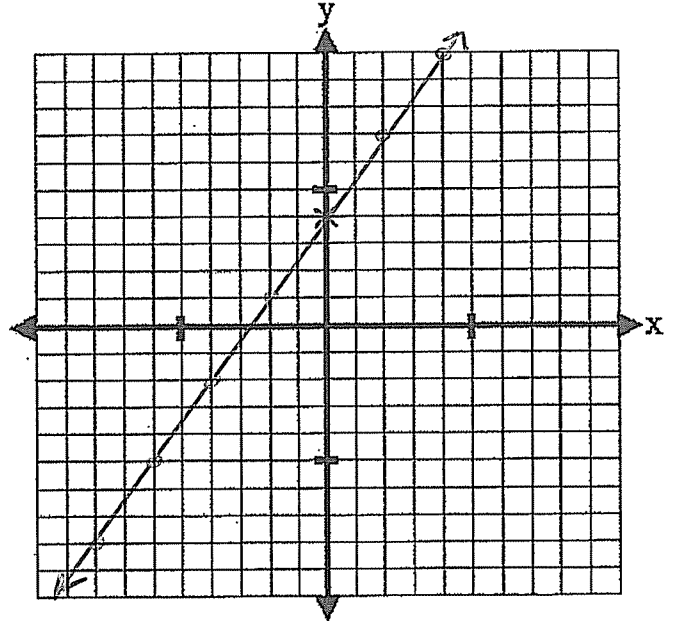


WATCH SIGNS!

$$6. \quad 3x - 2y = -8$$

$$\begin{array}{r} -3x \\ \hline -2y = -3x - 8 \\ \hline \frac{-2y}{-2} = \frac{-3x}{-2} - \frac{8}{-2} \end{array} \quad y = \frac{3}{2}x + 4$$

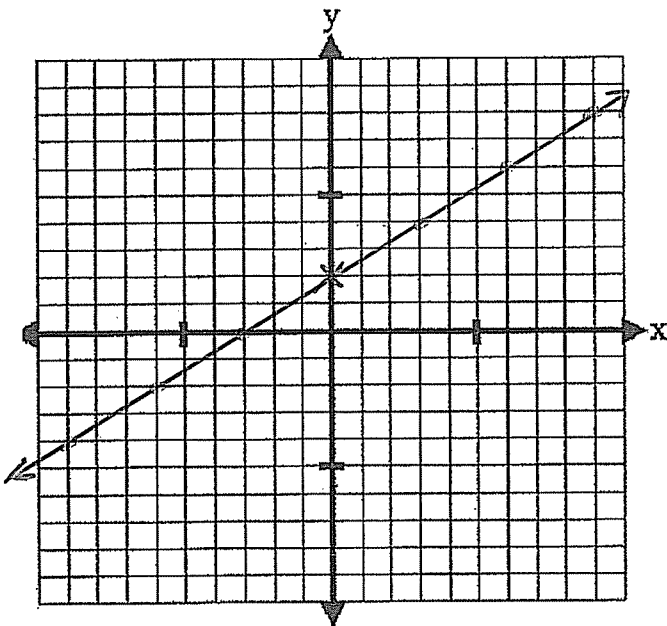
Slope = $\frac{3}{2}$ Y-Intercept = $(0, 4)$



$$7. \quad -6x + 9y = 18$$

$$\begin{array}{r} +6x \\ \hline 9y = 6x + 18 \\ \hline \frac{9y}{9} = \frac{6x}{9} + \frac{18}{9} \end{array} \quad \begin{array}{l} \text{(REDUCE!)} \\ y = \frac{6}{9}x + 2 \\ y = \frac{2}{3}x + 2 \end{array}$$

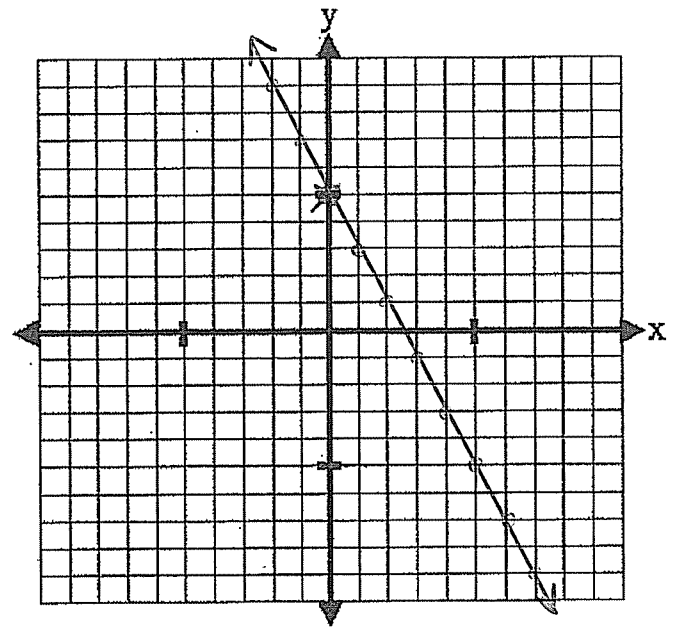
Slope = $\frac{2}{3}$ Y-Intercept = $(0, 2)$



$$8. \quad -10x - 5y = -25$$

$$\begin{array}{r} +10x \\ \hline -5y = 10x - 25 \\ \hline \frac{-5y}{-5} = \frac{10x}{-5} - \frac{25}{-5} \end{array} \quad y = -2x + 5$$

Slope = $-\frac{2}{1}$ Y-Intercept = $(0, 5)$

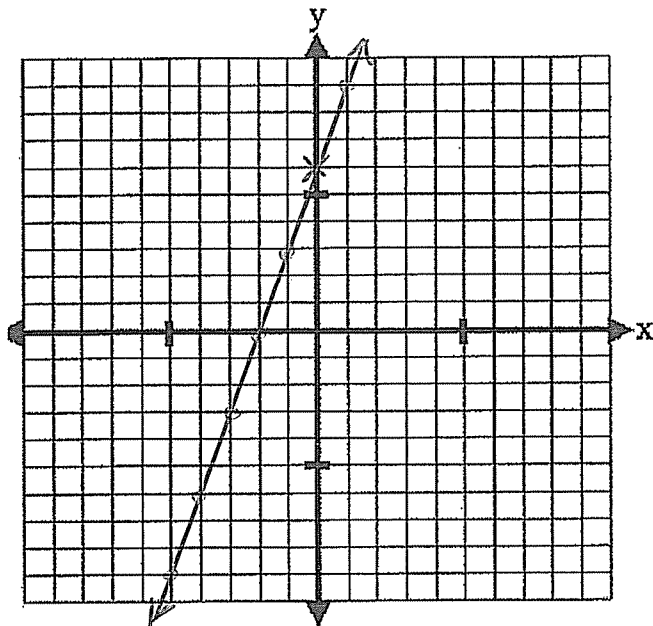


9. $9x - 3y = -18$

$$\begin{array}{r} -9x \quad -9x \\ \hline -3y = \frac{-9x - 18}{-3} \end{array}$$

$y = 3x + 6$

Slope = $\frac{3}{1}$ Y-Intercept = $(0, 6)$

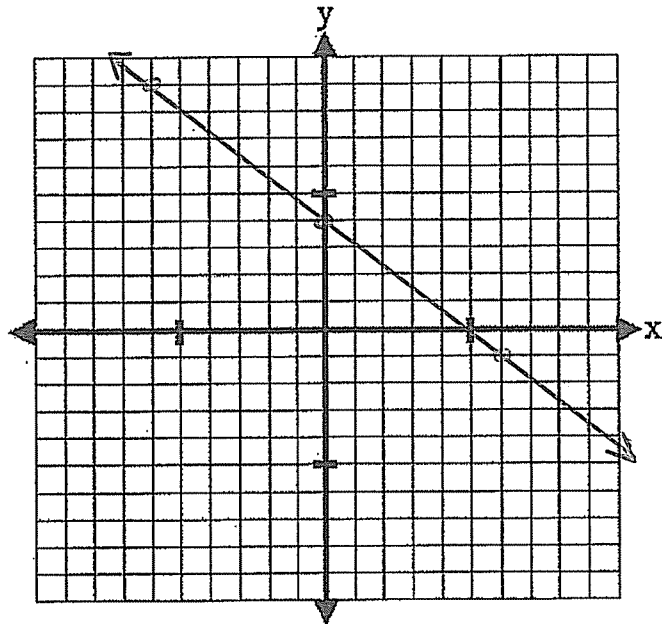


10. $5x + 6y = 24$

$$\begin{array}{r} -5x \quad -5x \\ \hline 6y = \frac{-5x + 24}{6} \end{array}$$

$y = \frac{-5}{6}x + 4$

Slope = $-\frac{5}{6}$ Y-Intercept = $(0, 4)$



Solve for y or x. Graph and identify the slope and y-intercept.

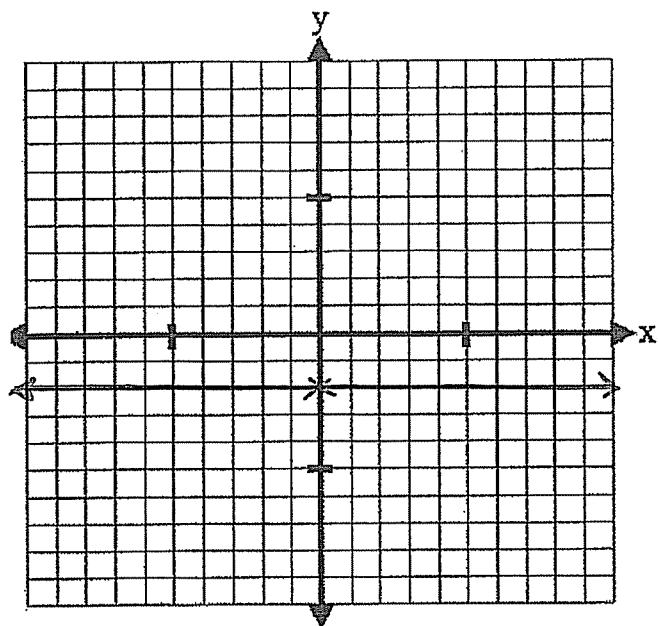
11. $-8y = 16$

$$\begin{array}{r} -8y = 16 \\ \hline -8 \quad -8 \end{array}$$

SPECIAL LINES!

$y = -2$

Slope = \emptyset Y-Intercept = $(0, -2)$



12. $\frac{16x}{16} = \frac{-32}{16}$

$x = -2$

Slope = \emptyset Y-Intercept = No Y INTERCEPT
No Slope (PARALLEL) TO Y AXIS

