

Find the x and y intercepts.

1. $-x + 5y = 15$

$$\begin{array}{l} -x = 15 \\ x = -15 \end{array} \quad \begin{array}{l} 5y = 15 \\ y = 3 \end{array}$$

x = (-15, 0) y = (0, 3)

2. $4x + 5y = -16$

$$\begin{array}{l} 4x = -16 \\ x = -4 \end{array} \quad \begin{array}{l} 5y = -16 \\ y = -\frac{16}{5} \end{array}$$

x = (-4, 0) y = (0, -\frac{16}{5})

3. $2x - 6y = 18$

$$\begin{array}{l} 2x = 18 \\ x = 9 \end{array} \quad \begin{array}{l} -6y = 18 \\ y = -3 \end{array}$$

x = (9, 0) y = (0, -3)

4. $4x - y = 3$

$$\begin{array}{l} 4x = 3 \\ x = \frac{3}{4} \end{array} \quad \begin{array}{l} -y = 3 \\ y = -3 \end{array}$$

x = (\frac{3}{4}, 0) y = (0, -3)

5. $3x - 6y = 9$

$$\begin{array}{l} 3x = 9 \\ x = 3 \end{array} \quad \begin{array}{l} -6y = 9 \\ y = -\frac{3}{2} \end{array}$$

x = (3, 0) y = (0, -\frac{3}{2})

6. $-3x + 4y - 12 = 0$

$$\begin{array}{l} -3x = 12 \\ x = -4 \end{array} \quad \begin{array}{l} 4y = 12 \\ y = 3 \end{array}$$

x = (-4, 0) y = (0, 3)

Find the slope of the line that passes through the points.

7. (-1, 11) and (2, 10)

$$m = \frac{11-10}{-1-2} = \frac{1}{-3}$$

m = -\frac{1}{3}

10. (2, 1) and (8, 4)

$$m = \frac{1-4}{2-8} = \frac{-3}{-6}$$

m = \frac{1}{2}

8. (-2, 0) and (4, 9)

$$m = \frac{0-9}{-2-4} = \frac{-9}{-6}$$

m = \frac{3}{2}

11. (-2, 7) and (0, 1)

$$m = \frac{7-1}{-2-0} = \frac{6}{-2}$$

m = -3

9. (-5, 4) and (1, -8)

$$m = \frac{4+8}{-5-1} = \frac{12}{-6}$$

m = -2

12. (3, 5) and (3, 14)

$$m = \frac{5-14}{3-3} = \frac{-9}{0}$$

m = undefined

4.3

Solving by the intercept method.

5) $5x + 3y = 15$

| X | Y |
|---|---|
| 0 | |
| | 0 |

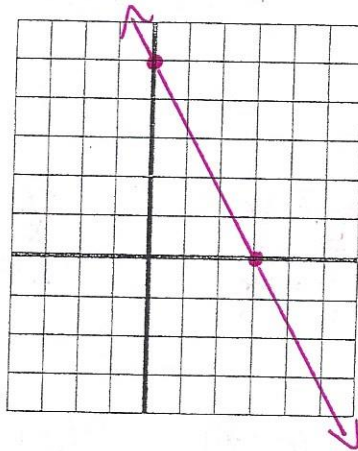
(3,0)
(0,5)

$$\frac{5x}{5} = \frac{15}{5}$$

$$x = 3$$

$$\frac{3y}{3} = \frac{15}{3}$$

$$y = 5$$



6) $-2x + 4y = 8$

| X | Y |
|---|---|
| 0 | |
| | 0 |

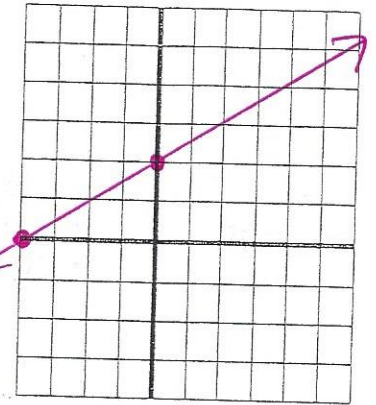
(-4,0)
(0,2)

$$\frac{-2x}{-2} = \frac{8}{-2}$$

$$x = -4$$

$$\frac{4y}{4} = \frac{8}{4}$$

$$y = 2$$



7) $2x - 2y = 8$

| X | Y |
|---|---|
| 0 | |
| | 0 |

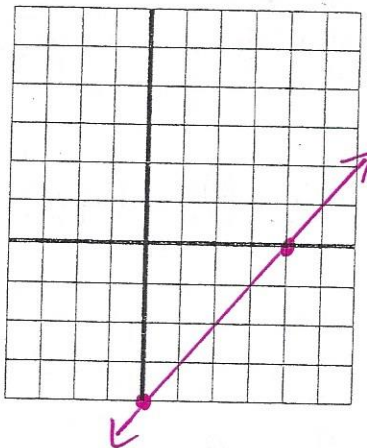
(4,0)
(0,-4)

$$\frac{2x}{2} = \frac{8}{2}$$

$$x = 4$$

$$\frac{-2y}{-2} = \frac{8}{-2}$$

$$y = -4$$



8) $-6x + 2y = 12$

| X | Y |
|---|---|
| 0 | |
| | 0 |

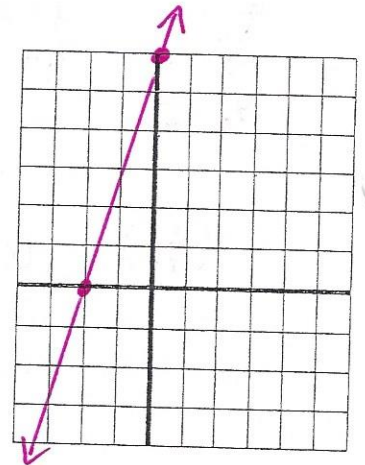
(-2,0)
(0,6)

$$\frac{-6x}{-6} = \frac{12}{-6}$$

$$x = -2$$

$$\frac{2y}{2} = \frac{12}{2}$$

$$y = 6$$



9) $4x + 2y = -12$

| X | Y |
|---|---|
| 0 | |
| | 0 |

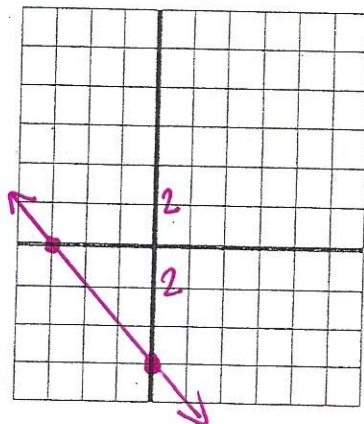
(-3,0)
(0,-6)

$$\frac{4x}{4} = \frac{-12}{4}$$

$$x = -3$$

$$\frac{2y}{2} = \frac{-12}{2}$$

$$y = -6$$



10) $3x - 2y = -12$

| X | Y |
|---|---|
| 0 | |
| | 0 |

(-4,0)
(0,6)

$$\frac{3x}{3} = \frac{-12}{3}$$

$$x = -4$$

$$\frac{-2y}{-2} = \frac{-12}{-2}$$

$$y = 6$$

