

1. Solve  $-3(x - 1) + 8(x - 3) = 6x + 7 - 5x$

$$x = 7$$

2. Simplify.

a.  $6 \div [(3 + 10 + 6 - 2 \cdot 9) \cdot 2]$

$$3$$

b.  $7 \div (3 - 2) \cdot 2 \div [2 \div (8 - 6)]$

$$14$$

3. Perform the indicated operation and simplify.

a.  $(9x^3 - 2x + 1) + (5x^2 + 12x - 4)$

$$9x^3 + 5x^2 + 10x - 3$$

b.  $(2x^2 + 3x) - (3x^2 + x - 4)$

$$-1x^2 + 2x + 4$$

c.  $(5x - 1)(x + 7)$

$$5x^2 + 34x - 7$$

d.  $(x - 3)(3x^2 - 2x - 4)$

$$3x^3 - 11x^2 + 2x + 12$$

4. Marty is spending money at the average rate of \$3 per day. After 14 days he has \$68 left. Write a linear equation for the situation and determine how much money he had before he starting spending money.

Equation:  $y = -3x + 110$

Answer:  $5110$

5. Given the equation, graph and find the following:

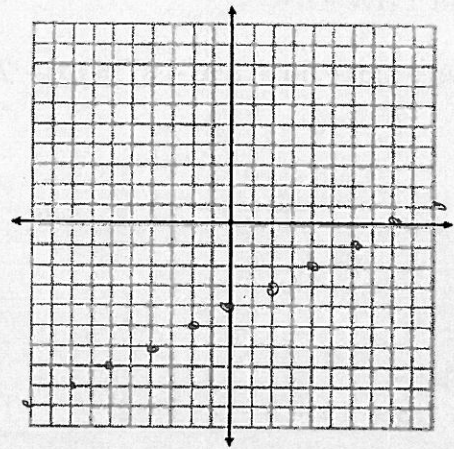
$$y = \frac{1}{2}x - 4$$

$x$  - intercept: 8

$y$  - intercept: -4

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

$b =$  -4



6. Given the equation, graph and find the following:

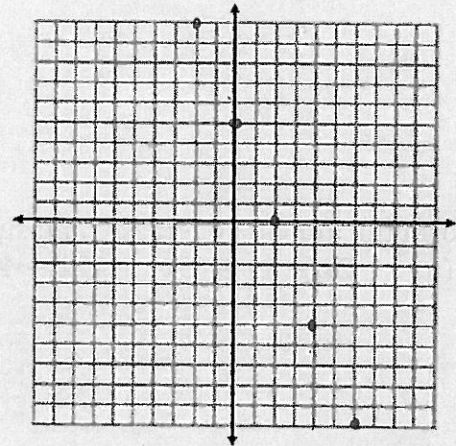
$$5x + 2y = 10$$

$x$  - intercept: 2

$y$  - intercept: 5

$m =$   $-\frac{5}{2}$

$b =$  5



7. Solve the system of equations by substitution.

$$\begin{aligned} -4x + 9y &= 9 \\ x &= 3y - 6 \end{aligned}$$

(9, 5)

8. Solve the system of equations by elimination.

$$\begin{aligned} 8x + 14y &= 4 \\ -6x - 7y &= -10 \end{aligned}$$

(4, -2)

9. What does the solution to a system of equations represent graphically?

where the 2 lines intersect