

**DO NOW**

Solve the system of equations - Choose any algebraic method

$$\boxed{3y - 2x = 18} \quad \boxed{3}$$

$$\boxed{5y + 3x = 11} \quad \boxed{2}$$

$$9y - 6x = 54$$

$$10y + 6x = 22$$

$$+ \quad \begin{array}{r} 19y \\ \hline 19 \end{array} = \frac{76}{19} \quad y = 4$$

$$\begin{array}{r} 3y - 2x = 18 \\ 3(4) - 2x = 18 \quad (-3, 4) \\ 12 - 2x = 18 \\ -12 \quad -12 \\ \hline -2x = 6 \\ \frac{-2x}{-2} = \frac{6}{-2} \\ x = -3 \end{array}$$

Mar 11-7:01 AM

**Homework Answers**

1. (1, 1)

2. Infinite # of Solutions

3. (2, -3)

4. (5, -4)

5. (0, -3)

Jan 23-9:19 AM

Word Problems Using Systems of Equations

Use two different variables to represent the unknowns in the problem. (Write "let" statements!)

Write a system of equations using your variables *2 equations*

Solve the system and CHECK

Make sure you answer the question!

Mar 11-7:06 AM

The sum of two numbers is 58. Their difference is 32. Find the numbers.

Let  $x = 1^{\text{st}}$  number  
 $y = 2^{\text{nd}}$  number

$$\begin{array}{r}
 x + y = 58 \\
 + x - y = 32 \\
 \hline
 2x = 90 \\
 \frac{2x}{2} = \frac{90}{2} \\
 x = 45
 \end{array}$$

$$\begin{array}{r}
 x + y = 58 \\
 x + y = 58 \\
 - 45 \quad - 45 \\
 \hline
 y = 13
 \end{array}$$

45 - 1<sup>st</sup> number  
 13 - 2<sup>nd</sup> number

Mar 11-7:09 AM

The sum of two numbers is 5. The larger number is 7 more than the smaller number.  
Find the numbers.

Let  $x$  = Larger #  
 $y$  = Smaller #

$$x + y = 5$$

$$x = 7 + y$$

$$7 + y + y = 5$$

$$\begin{array}{r} 7 + 2y = 5 \\ -7 \quad -7 \\ \hline \end{array}$$

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

$$y = -1$$

$$x + y = 5$$

$$\begin{array}{r} x + (-1) = 5 \\ +1 \quad +1 \\ \hline \end{array}$$

$$x = 6$$

6 - larger #  
-1 - Smaller #

Mar 11-7:10 AM