

Solving Systems of Equations by Elimination (Addition/Subtraction)

- 1.) So far, we have solved systems using graphing and substitution. We will now solve systems algebraically using _____ with addition and subtraction.
- 2.) The equations in the system must be in _____ in order to use _____.
- 3.) Standard Form: _____

Example 1:

Solve the system using elimination:

$$\begin{array}{r} x + y = 5 \\ 3x - y = 7 \end{array}$$

Step 1: Put the equations in Standard Form

They _____ are.

Step 2: Determine which variable to eliminate.

The _____ have the same coefficient.

Step 3: Add or subtract the equations.

_____ to eliminate _____

Step 4: Plug back in to find the other variable.

(____, ____)

Example 2:

Solve the system using elimination:

$$\begin{aligned}4x + y &= 7 \\4x - 2y &= -2\end{aligned}$$

Step 1: Put the equations in Standard Form

They _____ are.

Step 2: Determine which variable to eliminate.

The _____ have the same coefficient.

Step 3: Add or subtract the equations.

_____ to eliminate _____

Step 4: Plug back in to find the other variable.

(_____, _____)

Example 3:

Solve the system using elimination:

$$\begin{array}{r} -6x + 5y = 1 \\ 6x + 4y = -10 \end{array}$$

Step 1: Put the equations in Standard Form

They _____ are.

Step 2: Determine which variable to eliminate.

The _____ have the same coefficient.

Step 3: Add or subtract the equations.

_____ to eliminate _____

Step 4: Plug back in to find the other variable.

(_____, _____)

Example 4:

Solve the system using elimination:

$$\begin{aligned}7x + 2y &= 24 \\8x + 2y &= 30\end{aligned}$$

Step 1: Put the equations in Standard Form

They _____ are.

Step 2: Determine which variable to eliminate.

The _____ have the same coefficient.

Step 3: Add or subtract the equations.

_____ to eliminate _____

Step 4: Plug back in to find the other variable.

(_____, _____)