

### 7.3: Solving Systems through Elimination

“I WILL ...

Find Solutions and Solve Systems through Elimination method.”

#### I. Steps

- A. ARRANGE equations in like terms and multiply a term to attempt to cancel out a variable
- B. ADD the variables where at least one variable cancels out
- C. REPLACE the value into either equation
- D. CHECK the solution

#### II. Model Problems

<p>Ex 1: Solve using Elimination,</p> $\begin{cases} 2x + 3y = 11 \\ -2x + 5y = 13 \end{cases}$	<p>Ex 2: Solve using Elimination,</p> $\begin{cases} 4x + 3y = 2 \\ 5x + 3y = -2 \end{cases}$
<p>Your Turn: Solve using Elimination,</p> $\begin{cases} 5x + 6y = 4 \\ 7x + 6y = 8 \end{cases}$	<p>Ex 3: Solve using Elimination,</p> $\begin{cases} -2x + 7y = 10 \\ x - 3y = -3 \end{cases}$
<p>Ex 4: Solve using Elimination,</p> $\begin{cases} 4x - 3y = 20 \\ x + 2y = -6 \end{cases}$	<p>Ex 5: Solve using Elimination,</p> $\begin{cases} 2x = 2 + y \\ -5x + 4y = -2 \end{cases}$

<p>Your Turn: Solve using Elimination,</p> $\begin{cases} 6x + 5y = 19 \\ 2x + 3y = 5 \end{cases}$	<p>Ex 6: Solve using Elimination,</p> $\begin{cases} 3x + 11y = 4 \\ -2x - 6y = 0 \end{cases}$
<p>Ex 7: Solve using Elimination,</p> $\begin{cases} 7x - 3y = 2 \\ 6x + 5y = -21 \end{cases}$	<p>Ex 8: Solve using Elimination,</p> $\begin{cases} -8y = -9x + 4 \\ 2x - 3y = -4 \end{cases}$
<p>Your Turn: Solve using Elimination,</p> $\begin{cases} 4x - 3y = 8 \\ 5x - 2y = -11 \end{cases}$	<p>Ex 9: Solve using Elimination,</p> $\begin{cases} 2x + y = 2 \\ 4x + 2y = -5 \end{cases}$
<p>Ex 10: Solve using Elimination,</p> $\begin{cases} 2x - 3y = 4 \\ -4x + 6y = -8 \end{cases}$	<p>Your Turn: Solve using Elimination,</p> $\begin{cases} -18x + 6y = 24 \\ 3x - y = -2 \end{cases}$