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7.2: Solving Systems through Substitution
"I WILL …
Find Solutions and Solve Systems through Substitution method."

I. Steps

A. SOLVE for one equation into one variable
B. REPLACE one equation into other equation
C. SUBSTITUTE the value into either equation
D. CHECK the solution

Hint: BEST TIME TO USE SUBSTITUTION IS WHEN AN EQUATION HAS AN ISOLATED VARIABLE

II. Application Steps

A. Read the question, TWICE
B. Understand and TRANSLATE the QUESTION
C. Identify all variables by appropriately LABELING (this is required)
D. SOLVE using Substitution or Elimination and label accordingly
E. CHECK answer

III. Model Problems

Ex 1: Solve using Substitution, $\begin{cases} 3x-4y=8 \\ y=-2x+9 \end{cases}$	Ex 2: Solve using Substitution, $\begin{cases} 2x+y=-11 \\ y=3x-9 \end{cases}$

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Your Turn: Solve using Substitution, $\begin{cases} x+2y=11 \\ y=3x-2 \end{cases}$	Ex 3: Solve using Substitution, $\begin{cases} x-2y=-6 \\ 4x+6y=4 \end{cases}$
Ex 4: Solve using Substitution, $\begin{cases} 3x+4y=-2 \\ -x+2y=4 \end{cases}$	Your Turn: Solve using Substitution, $\begin{cases} x-y=3 \\ x+2y=-6 \end{cases}$
Ex 5: Solve using Substitution, $\begin{cases} \frac{1}{2}x-y=3 \\ x=6+2y \end{cases}$	Ex 6: Solve using Substitution, $\begin{cases} 6x+12y=5 \\ -4x-8y=0 \end{cases}$
Your Turn: Solve using Substitution, $\begin{cases} \frac{1}{4}x-y=2 \\ x=4y+8 \end{cases}$	

Assignment: Substitution Worksheet