Name: _____ Date: _____

5.3 Solving Systems of Linear Equations By Elimination

Essential Question: _____

Step 1: _____, if necessary, one or both equations by a constant so that at least one pair of like terms has the _____ or _____ coefficients.

Step 2: _____ or_____ the equations to eliminate one of the _____.

Step 3: _____ the resulting _____.

Step 4: _____ the value from Step 3 into one of the _____ equations to _____ for the other variable.

EXAMPLE 1 Solving a System of Linear Equations by Elimination

Solve the system of linear equations by elimination.

$3x + 2y = 4$ Equation 1

$3x - 2y = -4$ Equation 2

EXAMPLE 2 Solving a System of Linear Equations by Elimination

Solve the system of linear equations by elimination.

$-10x + 3y = 1$ Equation 1

$-5x - 6y = 23$ Equation 2

Example 2b

$5x + 8y = 1$

$-2x + 2 = 3y$

Solving Real-Life Problems

EXAMPLE 3 **Modeling with Mathematics**

A business with two locations buys seven large delivery vans and five small delivery vans. Location A receives five large vans and two small vans for a total cost of $235,000. Location B receives two large vans and three small vans for a total cost of $160,000. What is the cost of each type of van?