



4-3 Reteach to Build Understanding

Solving Systems of Equations by Elimination

1. Match each system of equations with the method you would use to solve it. Each method matches with two systems.

Substitution

Solve a system of linear equations using substitution when an equation is already solved for one variable, or if it is easy to solve for one variable.

Elimination

Solve a system of linear equations using elimination if you can multiply either equation by a constant to get coefficients that are opposite.

$$\begin{cases} y = 4x - 7 \\ 2x - 3y = 1 \end{cases}$$

$$\begin{cases} 4x + 3y = 8 \\ 5x - 3y = 1 \end{cases}$$

$$\begin{cases} 4x + 3y = 7 \\ 2x - 7y = 1 \end{cases}$$

$$\begin{cases} 2y + 1 = x \\ 2x - 3y = 1 \end{cases}$$

2. Brad incorrectly solved the system of equations $\begin{cases} 6x - 7y = 5 \\ 3x - 5y = 1 \end{cases}$.

The answers should be integers. Find and correct his error.

$$\begin{cases} 6x - 7y = 5 \\ 3x - 5y = 1 \end{cases} \xrightarrow{\text{Multiply by 2}} \begin{cases} 6x - 7y = 5 \\ 2(3x - 5y) = 2(1) \end{cases}$$

Add the new equations to eliminate x .

$$\begin{array}{r} 6x - 7y = 5 \\ 6x - 10y = 2 \\ \hline -17y = 7 \\ y = -\frac{7}{17} \end{array}$$

3. Beatrice wanted to solve the system of equations $\begin{cases} 4x - 3y = 9 \\ 3x + 2y = 11 \end{cases}$ by elimination.

To eliminate the x -terms, Beatrice could multiply the first equation by _____ and the second equation by _____ and add equations.

To eliminate the y -terms, Beatrice could multiply the first equation by _____ and the second equation by _____ and add equations.