

# PreCalculus Lesson 6-2

## Objective

Solve a System of Linear Equations Using Matrices

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# Example 1: Solve a System of Linear Equations Using Matrices

Solve the system of equations:

$$\begin{cases} 3x + y - z = 0 & (1) \\ 2x + z - 4 = 0 & (2) \\ y + 2z - 7 = 0 & (3) \end{cases}$$

## Example 2:

$$\text{Solve: } \begin{cases} x - 2y + 3z = 7 & (1) \\ 2x + y + z = 4 & (2) \\ -3x + 2y - 2z = -10 & (3) \end{cases}$$

### Example 3:

Solve: 
$$\begin{cases} x + y + z = -4 & (1) \\ 2x + y = 0 & (2) \\ 3x - y - z = 8 & (3) \end{cases}$$