

System of Equations with 3 Variables

Name: _____

Period: _____

Directions: Solve each system of 3 by 3 equations. Show all work.

1.
$$\begin{aligned} 3x - 2z &= 23 \\ 4y + 3z &= -16 \\ 2x + 5y &= 5 \end{aligned}$$

2.
$$\begin{aligned} 6x - z &= -10 \\ 2x + 7y &= 10 \\ -4y + 3z &= -14 \end{aligned}$$

3.
$$\begin{aligned} -6x + 5y &= -32 \\ 3y + 3z &= 15 \\ 2x - 7z &= -7 \end{aligned}$$

4.
$$\begin{aligned} 4y - 5z &= 30 \\ 2x + 9z &= -20 \\ 5x + 2y &= 5 \end{aligned}$$

$$\begin{aligned} & -4x + 3y = 9 \\ 5. \quad & 2x - 11z = 38 \\ & -5y - 4z = 21 \end{aligned}$$

$$\begin{aligned} & x + 5y = -19 \\ 6. \quad & 6y - z = -20 \\ & 3x - 4z = -20 \end{aligned}$$