Algebra II **Section 3.6**
Auch **Date:**

Objectives

- Solving linear systems in three variables

Example 1

Use elimination to solve the following system of equations.

$$x + 2y - 3z = -2$$
$$2x - 2y + z = 7$$
$$x + y + 2z = -4$$

Try it!

Use elimination to solve the following system of equations.

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

Example 2

Classifying systems with infinitely many solutions or no solutions.

$$\begin{cases} 4x - 2y + 4z = 8 \\ -3x + y - z = -4 \\ -2x + 2y - 6z = 4 \end{cases}$$

Try it!

Classifying systems with infinitely many solutions or no solutions.

$$\begin{cases} 3x - y + 2z = 4 \\ 2x - y + 3z = 7 \\ -9x + 3y - 6z = -12 \end{cases}$$

Classifying systems with infinitely many solutions or no solutions.

$$\begin{cases} x - y + 3z = 6 \\ 2x - 4y + 6z = 10 \\ y - z = -2 \end{cases}$$