

Systems of Linear Equations in  
Three Variables

1. Determine whether the given  
ordered triple is a solution of the  
system

$$(3, -1, 2)$$

$$5x - y + z = 18$$

$$7x + 3y - 2z = 14$$

$$x + y + z = 4$$

2. Solve each system

$$2x + 3y - z = 8$$

$$5x - y + 2z = 17$$

$$x + 7y + z = 28$$

3. Solve each system

$$2x + z = 13$$

$$x + 3y - z = 14$$

$$3x - 7y + z = 14$$

4. Solve each system

$$4z - 27 = 5(x - 2y)$$

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

$$-16 + 6z = 2(-x + y)$$