

Topic 3.7  
Solving Systems of Equations in Three Variables  
Homework

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Solve the following systems of equations.**

1.  $4x + 2y - 6z = -38$   
 $5x - 4y + z = -18$   
 $x + 3y + 7z = 38$

2.  $2p - 5q + r = 1$   
 $3q + 2r = 5$   
 $r = -2$

3.  $3x = -12$   
 $2x - y + 3z = -1$   
 $3x + 4 - z = -7$

4.  $4x + y = -7$   
 $x - 2z = 4$   
 $3y + 2z = 8$

5.  $-2y - 6z = 4$   
 $y + 4z = -5$   
 $x + 2y + 7z = -1$

6.  $x - 3y = 0$   
 $2x + 3y + 3z = 18$   
 $x + 2y - 4z = 10$

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7.  $x + 3y = 2$   
 $x - 5y + z = 1$   
 $2x + 3y + z = -2$

8.  $3x - 2y + 2z = 0$   
 $2x + y - z = 0$   
 $2x - y + 3z = 0$

9.  $6x + 2y - 3z = -17$   
 $7x - 5y + z = 72$   
 $2x + 8y + 3z = -21$

10.  $4x + y + z = 5$   
 $3x + 3y - 2z = 22$   
 $x - 2y - z = 3$