

# Practice

Student Edition  
Pages 165–171

## Solving Systems of Equations in Three Variables

Solve each system of equations.

1.  $2x - y + 2z = 15$   
 $-x + y + z = 3$   
 $3x - y + 2z = 18$

2.  $x - 4y + 3z = -27$   
 $2x + 2y - 3z = 22$   
 $4z = -16$

3.  $a + b = 3$   
 $-b + c = 3$   
 $a + 2c = 10$

4.  $3x - 2y + 4z = 15$   
 $x - y + z = 3$   
 $x + 4y - 5z = 0$

5.  $2x + 3y + 4z = 2$   
 $5x - 2y + 3z = 0$   
 $x - 5y - 2z = -4$

6.  $2x + y - z = -8$   
 $4x - y + 2z = -3$   
 $-3x + y + 2z = 5$

7.  $2x - 5y + z = 5$   
 $3x + 2y - z = 17$   
 $4x - 3y + 2z = 17$

8.  $p + 4r = -7$   
 $p - 3q = -8$   
 $q + r = 1$

9. The sum of three numbers is 6. The third number is the sum of the first and second number. The first number is one more than the third number. Find the numbers.

10. The sum of three numbers is  $-4$ . The second number decreased by the third is equal to the first. The sum of the first and second number is  $-5$ . Find the numbers.