

**Algebra II Honors Solving Systems of Equations****SECTION A**

Solve each system of equations by using substitution.

1.  $m + n = 20$   
 $m - n = -4$

2.  $x + 3y = -3$   
 $4x + 3y = 6$

3.  $w - z = 1$   
 $2w + 3z = 12$

4.  $3r + s = 5$   
 $2r - s = 5$

5.  $2b + 3c = -4$   
 $b + c = 3$

6.  $x - y = 1$   
 $2x + 3y = 12$

Solve each system of equations by using elimination.

7.  $2p - q = 5$   
 $3p + q = 5$

8.  $2j - k = 3$   
 $3j + k = 2$

9.  $3c - 2d = 2$   
 $3c + 4d = 50$

10.  $2f + 3g = 9$   
 $f - g = 2$

11.  $-2x + y = -1$   
 $x + 2y = 3$

12.  $2x - y = 12$   
 $2x - y = 6$

Solve each system of equations by using either substitution or elimination.

13.  $-r + t = 5$   
 $-2r + t = 4$

14.  $2x - y = -5$   
 $4x + y = 2$

15.  $x - 3y = -12$   
 $2x + y = 11$

16.  $2p - 3q = 6$   
 $-2p + 3q = -6$

17.  $6w - 8z = 16$   
 $3w - 4z = 8$

18.  $c + d = 6$   
 $c - d = 0$

19.  $2u + 4v = -6$   
 $u + 2v = 3$

20.  $3a + b = -1$   
 $-3a + b = 5$

21.  $2x + y = 6$   
 $3x - 2y = 16$

22.  $3y - z = -6$   
 $-3y - z = 6$

23.  $c + 2d = -2$   
 $-2c - 5d = 3$

24.  $3r - 2s = 1$   
 $2r - 3s = 9$

25. The sum of two numbers is 12. The difference of the same two numbers is  $-4$ . Find the numbers.26. Twice a number minus a second number is  $-1$ . Twice the second number added to three times the first number is 9. Find the two numbers.**SECTION A**

**Algebra II Honors Solving Systems of Equations****SECTION B**

Solve each system of equations by using substitution.

1.  $2x + y = 4$   
 $3x + 2y = 1$

2.  $x - 3y = 9$   
 $x + 2y = -1$

3.  $g + 3h = 8$   
 $\frac{1}{3}g + h = 9$

4.  $2a - 4b = 6$   
 $-a + 2b = -3$

5.  $2m + n = 6$   
 $5m + 6n = 1$

6.  $4x - 3y = -6$   
 $-x - 2y = 7$

7.  $u - 2v = \frac{1}{2}$   
 $-u + 2v = 5$

8.  $x - 3y = 16$   
 $4x - y = 9$

9.  $w + 3z = 1$   
 $3w - 5z = -4$

Solve each system of equations by using elimination.

10.  $2r + s = 5$   
 $3r - s = 20$

11.  $2m - n = -1$   
 $3m + 2n = 30$

12.  $6x + 3y = 6$   
 $8x + 5y = 12$

13.  $3j - k = 10$   
 $4j - k = 16$

14.  $2x - y = -4$   
 $-4x + 2y = 6$

15.  $2g + h = 6$   
 $3g - 2h = 16$

16.  $2t + 4v = 6$   
 $-t - 2v = -3$

17.  $3x - 2y = 12$   
 $2x + \frac{2}{3}y = 14$

18.  $\frac{1}{2}x + 3y = 11$   
 $8x - 5y = 17$

Solve each system of equations by using either substitution or elimination.

19.  $8x + 3y = -5$   
 $10x + 6y = -13$

20.  $8q - 15r = -40$   
 $4q + 2r = 56$

21.  $3x - 4y = 12$   
 $\frac{1}{3}x - \frac{4}{9}y = \frac{4}{3}$

22.  $4b - 2d = 5$   
 $-2b + d = 1$

23.  $s + 3y = 4$   
 $s = 1$

24.  $4m - 2p = 0$   
 $-3m + 9p = 5$

25.  $5g + 4k = 10$   
 $-3g - 5k = 7$

26.  $0.5x + 2y = 5$   
 $x - 2y = -8$

27.  $h - z = 3$   
 $-3h + 3z = 6$

**SPORTS** For Exercises 28 and 29, use the following information.

Last year the volleyball team paid \$5 per pair for socks and \$17 per pair for shorts on a total purchase of \$315. This year they spent \$342 to buy the same number of pairs of socks and shorts because the socks now cost \$6 a pair and the shorts cost \$18.

28. Write a system of two equations that represents the number of pairs of socks and shorts bought each year.

29. How many pairs of socks and shorts did the team buy each year?

**SECTION B**