

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

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

## Lesson 5.2 Solving Systems of Linear Equations Using Algebraic Methods

Solve each system of linear equations using the elimination method.

1.  $3y - x = 2$   
 $3y + x = 16$

2.  $x - 5y = 13$   
 $9y - x = -17$

3.  $7q + 2p = 29$   
 $2p - q = 5$

4.  $2w - 3v = 4$   
 $w + 3v = 29$

5.  $2a - b = 6$   
 $3a + b = 19$

6.  $6n - m = 3$   
 $3m - 6n = 15$

7.  $8x + 6y = 14$   
 $6x + 3y = 6$

8.  $4p + 5q = -18$   
 $3p - 10q = 69$

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**Solve each system of linear equations using the substitution method.**

9. 
$$\begin{aligned} 3a - b &= 13 \\ b &= 2a - 7 \end{aligned}$$

10. 
$$\begin{aligned} 5p + 3q &= -7 \\ q &= -2p + 5 \end{aligned}$$

11. 
$$\begin{aligned} 6c - b &= 5 \\ b - c &= 5 \end{aligned}$$

12. 
$$\begin{aligned} 2y - x &= 3 \\ y - x &= 4 \end{aligned}$$

13. 
$$\begin{aligned} 4h + k &= 7 \\ h + 2k &= 7 \end{aligned}$$

14. 
$$\begin{aligned} 3x + 2y &= 36 \\ 5y - x &= 39 \end{aligned}$$

15. 
$$\begin{aligned} 5t + 2s &= -3 \\ 7t - 2s &= 15 \end{aligned}$$

16. 
$$\begin{aligned} 5x + 4y &= -26 \\ 5 - x &= -6y \end{aligned}$$