

11-4

Practice Worksheet

Elimination Using Addition and Subtraction

Use elimination to solve each system of equations.

$$\begin{aligned} 1. \quad x - y &= 1 \\ x + y &= 3 \end{aligned}$$

$$\begin{aligned} 2. \quad -x + y &= 1 \\ x + y &= 11 \end{aligned}$$

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

$$\begin{aligned} 4. \quad -x + 3y &= 6 \\ x + 3y &= 18 \end{aligned}$$

$$\begin{aligned} 5. \quad 3x - y &= -1 \\ -3x - y &= 5 \end{aligned}$$

$$\begin{aligned} 6. \quad x + 4y &= -8 \\ x - 4y &= -8 \end{aligned}$$

$$\begin{aligned} 7. \quad 3a + 4b &= 2 \\ 4a - 4b &= 12 \end{aligned}$$

$$\begin{aligned} 8. \quad 3x + 4y &= 19 \\ 3x + 6y &= 33 \end{aligned}$$

$$\begin{aligned} 9. \quad 2x - 3y &= 9 \\ -5x - 3y &= 30 \end{aligned}$$

$$\begin{aligned} 10. \quad x + 4y &= 11 \\ x - 6y &= 11 \end{aligned}$$

$$\begin{aligned} 11. \quad 3y - x &= 2 \\ -2y - x &= -18 \end{aligned}$$

$$\begin{aligned} 12. \quad 6r - 3t &= 6 \\ 6r + 8t &= -16 \end{aligned}$$

$$\begin{aligned} 13. \quad 5x - y &= -6 \\ -x + y &= 2 \end{aligned}$$

$$\begin{aligned} 14. \quad -3x + y &= 3 \\ 3x + 2y &= -12 \end{aligned}$$

$$\begin{aligned} 15. \quad -\frac{1}{3}x - \frac{4}{3}y &= -2 \\ \frac{1}{3}x - \frac{2}{3}y &= 4 \end{aligned}$$

Use a system of equations and elimination to solve each problem.

16. The sum of two numbers is 28. Their difference is 4. What are the two numbers?

17. A two-digit number is 11 times its units digit. The sum of the digits is 12. Find the number.

11-5 Practice Worksheet

Elimination Using Multiplication

Use elimination to solve each system of equations.

$$\begin{aligned} 1. \quad 2x + 5y &= 3 \\ -x + 3y &= -7 \end{aligned}$$

$$\begin{aligned} 2. \quad 2x + y &= 3 \\ -4x - 4y &= -8 \end{aligned}$$

$$\begin{aligned} 3. \quad 5x - 2y &= -10 \\ 3x + 6y &= 66 \end{aligned}$$

$$\begin{aligned} 4. \quad 7x + 4y &= -4 \\ 5x + 8y &= 28 \end{aligned}$$

$$\begin{aligned} 5. \quad 4x - 2y &= -14 \\ 3x - y &= -8 \end{aligned}$$

$$\begin{aligned} 6. \quad 5x + 3y &= -10 \\ 3x + 5y &= -6 \end{aligned}$$

$$\begin{aligned} 7. \quad 2x + y &= 0 \\ 5x + 3y &= 2 \end{aligned}$$

$$\begin{aligned} 8. \quad 9x - 6y &= -12 \\ x + 2y &= 0 \end{aligned}$$

$$\begin{aligned} 9. \quad 0.5x + 0.5y &= -2 \\ x - 0.25y &= 6 \end{aligned}$$

Use a system of equations and elimination to solve each problem.

10. The sum of the digits of a two-digit number is 11. If 45 is added to the number, the result is the number with the digits reversed. Find the number.

11. Suppose you invested \$10,000, part at 6% annual interest and the rest at 9% annual interest. If you received \$684 in interest after one year, how much did you invest at each rate?