

Practice Set 5.3

Solving Systems of Linear Equations by the Addition Method

Solve each system by the Addition Method. If there is no solution or infinitely many solutions, so state.

1. $x - y = 2$ 1. _____
 $-x + 2y = -8$

2. $2x + y = 10$ 2. _____
 $3x - y = -5$

3. $x + 4y = 3$ 3. _____
 $3x - 4y = -23$

4. $2x - y = 6$ 4. _____
 $2x + y = 10$

5. $x - y = -7$ 5. _____
 $3x + 2y = -6$

6. $2x - 4y = 6$ 6. _____
 $x - y = -2$

7. $3x + y = 1$ 7. _____
 $2x + y = 1$

8. $3x + 6y = 12$ 8. _____
 $x + 2y = 4$

9. $\frac{x}{6} + \frac{y}{4} = \frac{11}{12}$ 9. _____
 $\frac{x}{18} - \frac{y}{2} = \frac{-5}{18}$

Name _____

Date _____

10.
$$\begin{aligned} 2x - 4y &= -1 \\ 10x - 20y &= 5 \end{aligned}$$

10. _____

11.
$$\begin{aligned} 3x - 2y &= -9 \\ 2x - 7y &= 11 \end{aligned}$$

11. _____

12.
$$\begin{aligned} 5x + 11y &= 14 \\ 4x &= 15y + 35 \end{aligned}$$

12. _____

For the following six linear systems, solve two by graphing using the graphs provided at the end of the exercise. Solve two by the substitution method and two by the addition method. Evaluate the most efficient method for solving each system before beginning.

13.
$$\begin{aligned} y &= -x \\ y &= -x + 4 \end{aligned}$$

13. _____

14.
$$\begin{aligned} y &= 5 - x \\ 3x - 4y &= -20 \end{aligned}$$

14. _____

15.
$$\begin{aligned} x + y &= 10 \\ y &= x + 8 \end{aligned}$$

15. _____

Name _____

Date _____

16. $3x - 2y = 10$
 $5x + 3y = 4$

16. _____

17. $y = 3$
 $x = 5$

17. _____

18. $2x + y = 7$
 $x - y = 8$

18. _____

