

Practice

Elimination Using Addition and Subtraction

State whether addition, subtraction, or substitution would be most convenient to solve each system of equations. Then solve the system.

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

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

3. $x + 4y = 11$
 $x - 6y = 11$

4. $-x + 3y = 6$
 $x + 3y = 18$

5. $3x + 4y = 19$
 $3x + 6y = 33$

6. $x + 4y = -8$
 $x - 4y = -8$

7. $3a + 4b = 2$
 $4a - 4b = 12$

8. $3x - y = -1$
 $-3x - y = 5$

9. $2x - 3y = 9$
 $-5x - 3y = 30$

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

11. $3y - x = 2$
 $-2y - x = -18$

12. $5x - y = -6$
 $-x + y = 2$

13. $6r - 3t = 6$
 $6r + 8t = -16$

14. $-3x + y = 3$
 $3x + 2y = -12$

15. $-\frac{1}{3}x - \frac{4}{3}y = -2$
 $\frac{1}{3}x - \frac{2}{3}y = 4$

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.