

Mathematics

Algebra

1. Solve for x in the equation $2x + 5 = 15$.

2. Simplify the expression $3x^2 + 4x - 7x^2 + 2x + 9$.

3. Factor the quadratic expression $x^2 - 5x + 6$.

4. Solve the system of linear equations:

$$\begin{cases} x + y = 7 \\ 2x - y = 3 \end{cases}$$

5. Find the slope of the line passing through the points $(2, 3)$ and $(4, 7)$.

6. Write the equation of the line with a slope of -3 and a y-intercept of 4 .

7. Solve for x in the equation $3(x - 2) = 12$.

8. Simplify the expression $5x^3 - 2x^2 + 7x - 4x^3 + 1$.

9. Factor the quadratic expression $x^2 + 8x + 15$.

10. Solve the system of linear equations:

$$\begin{cases} x + 2y = 10 \\ 3x - y = 5 \end{cases}$$

11. Find the slope of the line passing through the points $(-1, 2)$ and $(3, 6)$.

12. Write the equation of the line with a slope of 2 and a y-intercept of -1 .

13. Solve for x in the equation $4(x + 1) = 20$.

14. Simplify the expression $6x^2 - 3x + 9x^2 - 5x + 2$.

15. Factor the quadratic expression $x^2 - 9$.

16. Solve the system of linear equations:

$$\begin{cases} 2x + y = 8 \\ x - 2y = 1 \end{cases}$$

17. Find the slope of the line passing through the points $(0, 5)$ and $(4, 1)$.

18. Write the equation of the line with a slope of $-1/2$ and a y-intercept of 3 .

19. Solve for x in the equation $5(x - 3) = 10$.

20. Simplify the expression $8x^3 - 4x^2 + 12x - 8x^3 + 5$.

21. Factor the quadratic expression $x^2 + 11x + 28$.

22. Solve the system of linear equations:

$$\begin{cases} x + 3y = 9 \\ 2x - y = 4 \end{cases}$$