In this worksheet you will learn how to factorise quadratic equations to find their solutions efficiently. Each question provides an equation that you need to factorise and solve for x. Read each instruction carefully and remember to check your factorisation by expanding your factors.

Easy Questions

1. Solve the quadratic equation $x^2 + 5x + 6 = 0$ by factorising.

2. Factorise and solve $x^2 - 3x - 10 = 0$.

3. Solve the equation $x^2 + 4x + 4 = 0$ by factorisation.

4. Solve $x^2 - x - 6 = 0$ by factorising.

5. Factorise and solve $x^2 + x - 6 = 0$.

Intermediate Questions

6. Solve $2x^2 + 7x + 3 = 0$ by factorisation.

7. Factorise and solve $2x^2 + 5x - 3 = 0$.

8. Factorise $3x^2 - 11x + 6 = 0$ and state the solutions.

9. Solve by factorisation: $4x^2 + 4x - 3 = 0$.

10. Factorise and solve $6x^2 - x - 15 = 0$.

11. Solve $2x^2 - 5x - 3 = 0$ by factorisation.

12. Factorise the equation $-x^2 + 5x - 6 = 0$ and state its solutions.

13. Solve $5x^2 + 13x + 6 = 0$ by factorisation.

14. Factorise and solve $4x^2 - 12x + 9 = 0$.

15. Solve $6x^2 + x - 2 = 0$ by factorisation.

16. Factorise and solve $8x^2 - 2x - 3 = 0$.

17. Solve the equation $3x^2 + x - 4 = 0$ by factorisation.

18. Factorise and solve $2x^2 + 3x - 9 = 0$.

19. Solve $-2x^2 + 7x + 3 = 0$ by first rewriting and then factorising.

20. Factorise the quadratic $3x^2 - x - 4 = 0$ and determine the solutions.

Hard Questions

21. Solve $6x^2 - 11x - 35 = 0$ by factorisation.

22. Factorise and solve $8x^2 + 2x - 15 = 0$.

23. Factorise the equation $9x^2 - 30x + 25 = 0$ and state its solution.

24. Solve $10x^2 + 3x - 7 = 0$ by factorisation.

25. Factorise and solve $12x^2 - 5x - 7 = 0$.

26. Factorise the quadratic $15x^2 + 14x - 8 = 0$ and state its roots.

27. Solve $18x^2 - 29x - 15 = 0$ by factorisation.

28. Factorise and solve $20x^2 + 3x - 2 = 0$.

29. Solve the equation $21x^2 + 2x - 3 = 0$ by factorisation.

30. Factorise $24x^2 - 10x - 21 = 0$ and determine the values of x.