



In this worksheet you will learn to factorise algebraic expressions by extracting common factors and grouping terms. Read each question carefully and show all your working.

## Easy Questions

1. Factorise  $2x + 6$ .
2. Factorise  $5y + 10$ .
3. Factorise  $3a + 9$ .
4. Factorise  $4m + 8$ .
5. Factorise  $12p + 18$ .

## Intermediate Questions

6. Factorise  $3x^2 + 6x$ .
7. Factorise  $4ab + 8ac$ .
8. Factorise  $2x + 2$ .
9. Factorise  $5xy + 10xz + 15y + 30z$ .
10. Factorise  $ax + ay + bx + by$ .
11. Factorise  $2x(x + 3) + 4(x + 3)$ .
12. Factorise  $7mn + 14m^2$ .
13. Factorise  $6xy + 9xz$ .
14. Factorise  $ab + 2a + 3b + 6$ .
15. Factorise  $4x^2 - 8x$ .
16. Factorise  $3p^3 + 6p^2$ .
17. Factorise  $10x + 15$ .
18. Factorise  $6a + 9b$ .
19. Factorise  $8m^2 + 12m$ .
20. Factorise  $5x(y + 2) + 3(y + 2)$ .

## Hard Questions

21. Factorise  $3x^2y + 9xy^2$ .
22. Factorise  $2x^3 + 4x^2 - 6x$ .
23. Factorise  $6a^2b - 9ab^2 + 4a - 6b$ .
24. Factorise  $4x^2y + 8xy^2 + 5x^2 + 10xy$ .
25. Factorise  $2x(y + 3) + 4(y + 3) - x(y + 3)$ .
26. Factorise  $3ab + 3a + 2b + 2$ .
27. Factorise  $5x^2 - 15x + 10x - 30$ .
28. Factorise  $4x(x + 1) - 6(x + 1)$ .
29. Factorise  $7y^2 + 14y - 3y - 6$ .
30. Factorise  $2x^2y + 4xy^2 - x^2 - 2xy$ .