

Factorisation

Chapter 13: Factorisation · Topic 1

Key Concept

Common factor method involves finding the greatest common factor and factoring it out, like $6x+9 = 3(2x+3)$.

Factorisation using identities involves recognising patterns, like a^2-b^2 factoring to $(a+b)(a-b)$.

Factorising trinomials, like x^2+5x+6 , involves finding two numbers that multiply to 6 and add to 5, giving $(x+2)(x+3)$.

Factorisation is essential for solving equations, simplifying fractions, and various algebra applications.

Quick Revision Notes

- Common factor method factors out the GCF.
- $6x+9 = 3(2x+3)$.
- Identities help factorise, like $a^2-b^2=(a+b)(a-b)$.
- Trinomials factor by finding two matching numbers.
- $x^2+5x+6 = (x+2)(x+3)$, since $2 \times 3=6$, $2+3=5$.
- Factorisation reverses expansion.
- It's essential for solving equations.
- It also helps simplify fractions.

Practice Questions

- 1 Factorise $8x+12$.
- 2 Factorise x^2-9 using an identity.
- 3 Factorise $x^2+7x+12$.
- 4 Discuss the common factor method.
- 5 Solve two factorisation problems.
- 6 Explain why factorisation helps solve equations.