

Linear Equations in One Variable

Chapter 14: Linear Equations in One Variable · Topic 1

Key Concept

To solve equations with variables on both sides, like $3x+5 = x+11$, we first move variables to one side and constants to the other.

For $3x+5 = x+11$, we get $3x-x = 11-5$, giving $2x=6$, so $x=3$.

Equations with fractions require clearing denominators first, often by multiplying through by the least common denominator.

Solving linear equations is a fundamental algebra skill used in many real-life applications, like calculating unknown costs or quantities.

Quick Revision Notes

- Move variables to one side, constants to the other.
- $3x+5=x+11$ becomes $2x=6$, so $x=3$.
- Equations with fractions need clearing denominators.
- Multiply through by the LCD to clear fractions.
- Solving linear equations is fundamental algebra.
- It applies to real-life unknown calculations.
- Practice builds equation-solving confidence.
- This skill extends to more complex equations later.

Practice Questions

- 1 Solve $4x+3=2x+11$.
- 2 Solve $6x-5=3x+10$.
- 3 Solve $x/2+3=7$.
- 4 Discuss the steps to solve equations with variables on both sides.
- 5 Solve a word problem using a linear equation.
- 6 Create your own linear equation and solve it.