

Simple Linear Equations (Including Word Problems)

Chapter 11: Simple Linear Equations (Including Word Problems) · Topic 1

Key Concept

To solve an equation like $2x + 3 = 11$, we isolate x by performing inverse operations: subtract 3 from both sides, then divide by 2.

This gives us $2x = 8$, then $x = 4$, showing the value that makes the equation true.

Word problems require translating the situation into an equation first, like 'a number plus 5 equals 12' becoming $x + 5 = 12$.

Practising equation-solving and word problems builds essential algebra skills for finding unknown values in various situations.

Quick Revision Notes

- We isolate the variable using inverse operations.
- $2x+3=11$: subtract 3, then divide by 2.
- This gives $2x=8$, then $x=4$.
- Word problems must first become equations.
- 'A number plus 5 equals 12' becomes $x+5=12$.
- Solving builds algebra skills.
- It helps find unknowns in real situations.
- Practice improves equation-solving confidence.

Practice Questions

- 1 Solve $3x + 2 = 14$.
- 2 Solve $5x - 3 = 17$.
- 3 Translate 'twice a number minus 4 equals 10' into an equation and solve.
- 4 Solve $x/4 = 7$.
- 5 Create your own word problem and equation.
- 6 Explain the steps to solve a linear equation.