

Ratio and Proportion

Chapter 7: Ratio and Proportion · Topic 1

Key Concept

Continued proportion involves three or more quantities where the ratio between consecutive terms remains constant, like $a:b = b:c$.

If $a:b = b:c$, then b is called the mean proportional, calculated as $b = \sqrt{a \times c}$.

Properties of proportion, like invertendo, alternendo, and componendo-dividendo, help simplify and solve complex proportion problems.

Ratio and proportion applications extend to real-life situations like mixing solutions, scaling recipes, and financial calculations.

Quick Revision Notes

- Continued proportion: $a:b = b:c$.
- b is the mean proportional.
- $b = \sqrt{a \times c}$.
- Properties: invertendo, alternendo, componendo-dividendo.
- These simplify complex proportion problems.
- Applications include mixing solutions.
- They also include scaling recipes.
- Financial calculations also use these concepts.

Practice Questions

- 1 Find the mean proportional between 3 and 27.
- 2 Discuss continued proportion with an example.
- 3 Research the componendo-dividendo property.
- 4 Solve a ratio and proportion word problem.
- 5 Explain a real-life use of proportion.
- 6 Create your own continued proportion example.