

Understanding Inverse Proportion

Chapter 10: Proportional Reasoning–2 · Topic 1

Key Concept

A classic example: if 4 workers complete a task in 6 days, then fewer workers would take proportionally longer, while more workers would finish proportionally faster — the total 'work' (workers $\times$ days) stays constant. Recognising when a real-world situation follows inverse proportion, rather than direct proportion, is crucial, since applying the wrong type of reasoning would lead to completely incorrect answers.

Quick Revision Notes

- Inverse proportion: one quantity increases as the other decreases, keeping their product constant.
- If one quantity doubles, the other (in inverse proportion) halves, and vice versa.
- Example: workers and days for a fixed task — more workers means fewer days needed.
- Recognising direct vs inverse proportion correctly is crucial for solving problems accurately.

Practice Questions

- 1 If 6 workers finish a job in 10 days, how many days will 3 workers take?
- 2 Explain the key difference between direct and inverse proportion.
- 3 Give one real-life example of two quantities in inverse proportion.