Solve practical direct- and inverse-variation problems.

Key skills | Free preview

Learning target: Solve practical direct- and inverse-variation problems.

Direct variation keeps the ratio of response to input constant; inverse variation keeps their product constant. Neither relation is established merely by an increasing or decreasing graph. Derive the proportionality constant from the situation and check the remaining observations. State domain restrictions and whether assumptions such as equal worker productivity are credible.

Try the mathematics

Task 1. A pump transfers 42 L in 6 minutes at a constant rate. Find a direct-variation rule and the amount transferred in 11 minutes. For a fixed task, 3 equally productive workers require 8 hours; find an inverse-variation rule and the time for 6 workers.

Continue with the full worksheet

The complete resource has 2 focused task sets and substantive worked solutions. Use an exercise book or print the A4 worksheet. This preview shows the first task without its full solution.

Find this resource: https://resources.aspiretopowerlearning.com.au/vce/skills/aspire-internal-gm-u2-o1-aos3-ks-01/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). General Mathematics; Unit 2; Outcome 1; Key skills; Variation; bullet 1; p. 39.

The learning target is a concise paraphrase. Aspire reference: aspire-internal-gm-u2-o1-aos3-ks-01. This is an internal identifier, not an official VCAA code.

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