Form a practical linear model and justify its valid input domain.

Key skills | Free preview

Learning target: Form a practical linear model and justify its valid input domain.

A linear model combines a starting amount with a constant change per unit of input. The arithmetic formula does not decide its own domain: practical restrictions do. Explain the units of the gradient and intercept, identify when the process changes or stops, and judge predictions only within the range where the assumptions remain reasonable.

Try the mathematics

Task 1. A tank begins with 600 L and drains at 25 L per minute. Form V(t), find the time at which 200 L remains, and state a valid time domain.

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-u1-o1-aos3-ks-01/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). General Mathematics; Unit 1; Outcome 1; Key skills; Linear functions, graphs, equations and models; bullet 1; p. 32.

The learning target is a concise paraphrase. Aspire reference: aspire-internal-gm-u1-o1-aos3-ks-01. This is an internal identifier, not an official VCAA code.

Free preview: share intact with attribution, without charging. Full resource rights are not included.

Original independent practice. Not published or endorsed by VCAA. The activity is not an official SAC, examination or complete treatment of every clause of a broad curriculum requirement.