Build and interpret piecewise linear models of practical situations.

Key skills | Free preview

Learning target: Build and interpret piecewise linear models of practical situations.

Piecewise models use different rules on stated input intervals. A line-segment model may be continuous across a boundary, whereas a step charge can jump as soon as the next interval begins. Decide which endpoints are included, especially at a charging threshold. Graphs should show these inclusions and the units on both axes.

Try the mathematics

Task 1. Delivery costs $6 plus $2 per kilogram for $0 \leq m \leq 3$, and $12 plus $1 for each kilogram above 3 when $m > 3$. Write a piecewise rule, calculate C(2), C(3), C(5), and sketch its two segments.

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-05/

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 5; p. 32.

The learning target is a concise paraphrase. Aspire reference: aspire-internal-gm-u1-o1-aos3-ks-05. This is an internal identifier, not an official VCAA code.

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