State assumptions and definitions, and use examples, counterexamples, diagrams and models precisely

Key skills | Free preview

Learning target: State assumptions and definitions, and use examples, counterexamples, diagrams and models precisely.

Mathematical language makes the scope of a claim testable. A definition states what a term means; an assumption limits the setting; an example illustrates; and a counterexample refutes a universal statement. A valid diagram can support reasoning, but its appearance alone cannot establish all cases.

Try the mathematics

Task 1. Define an even integer. State the assumptions and prove that the sum of two even integers is even. Give one numerical example and explain the different roles of the example and proof.

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/sm-u1-o1-ks-02/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Specialist Mathematics; Unit 1; Outcome 1; Key skills; bullet 2; p. 62.

The learning target is a concise paraphrase. Aspire reference: sm-u1-o1-ks-02. This is an internal identifier, not an official VCAA code.

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