Designing an investigative algorithm

Key knowledge | Free preview

Learning target: Understand ordered steps, choices and repetition in algorithms and their representation, including pseudocode.

An algorithm needs explicit inputs, an initial state, a sequence of operations and a stopping rule. Decisions and repetition must be unambiguous enough for another person or a computer to follow. Trace a few steps to detect logical errors, then compare the algorithm’s output with an independently derived result and interpret its precision.

Try the mathematics

Task 1. Design a numerical search in steps of 0.1 minute for the first model time with $T \leq 30$ °C. Give pseudocode and describe the precision of the answer.

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-mm-u2-o2-kk-04/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Unit 2; Outcome 2; Key knowledge; bullet 4; p. 56.

The learning target is a concise paraphrase. Aspire reference: aspire-mm-u2-o2-kk-04. This is an internal identifier, not an official VCAA code.

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