Designing an investigative algorithm

Key skills | Free preview

Learning target: Use algorithms, patterns, models and simulations to solve a contextual problem.

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. Write an algorithm that finds the smallest integer n with planned margin at most 0.04, using planning proportion 0.32. Include a loop and stopping condition.

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-u34-o2-ks-04/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Units 3–4; Outcome 2; Key skills; bullet 4; p. 103.

The learning target is a concise paraphrase. Aspire reference: aspire-mm-u34-o2-ks-04. This is an internal identifier, not an official VCAA code.

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