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. Write pseudocode to compare all half-metre widths in the garden’s feasible interval and report a best width. Include initialisation, repetition and a decision.

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-u1-o2-kk-04/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Unit 1; Outcome 2; Key knowledge; bullet 4; p. 48.

The learning target is a concise paraphrase. Aspire reference: aspire-mm-u1-o2-kk-04. 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.