Explain how sequencing, decisions and iteration operate in technological algorithms and simulations

Key skills | Free preview

Learning target: Explain how sequencing, decisions and iteration operate in technological algorithms and simulations.

Use the population {0,2,4,6}, drawing uniformly and independently with replacement. Its mean is 3 and variance is 5. A simulation stores one mean per sample; a graph of $g(x)=\sqrt{(5/x)}$ provides a separate standard-error model. Record your procedure and actual outputs, using the supplied results only as checks.

Try the mathematics

Task 1. Explain the role of each control structure in the sampling pseudocode: an outer loop over runs, total=0, an inner loop over observations and a validity test $n \geq 1$. What changes if total=0 is outside the outer loop?

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-u2-o3-ks-09/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Specialist Mathematics; Unit 2; Outcome 3; Key skills; bullet 9; p. 71.

The learning target is a concise paraphrase. Aspire reference: sm-u2-o3-ks-09. This is an internal identifier, not an official VCAA code.

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