Checking a probability assignment

Key knowledge | Free preview

Learning target: Understand that a complete probability assignment is non-negative and totals one.

Probabilities assigned to mutually exclusive elementary outcomes must each be at least zero and their total must be one. These two checks are separate. An event probability is found by adding its elementary-outcome probabilities. A sum of one alone does not make a proposed model valid if any component is negative.

Try the mathematics

Task 1. A variable has outcomes 0,1,2,3 with probabilities 0.20,k,0.35,0.15. Find k. Check the model and calculate P(X≥2).

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-o1-kk-10/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Unit 1; Outcome 1; Key knowledge; bullet 10; p. 47.

The learning target is a concise paraphrase. Aspire reference: aspire-mm-u1-o1-kk-10. This is an internal identifier, not an official VCAA code.

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