Calculating and interpreting a confidence interval

Key knowledge | Free preview

Learning target: Understand confidence intervals for population proportions and why intervals change between samples.

A large-sample confidence interval uses an observed proportion to estimate the unknown population proportion. Its margin depends on the confidence level, estimated variability and sample size. The confidence percentage describes the long-run success rate of the interval procedure under its assumptions. It does not assign a new probability to a fixed population parameter after an interval is observed.

Try the mathematics

Task 1. A random sample has 84 successes out of 120. Calculate the approximate 95% interval using z=1.96 and explain its meaning.

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-o1-kk-17/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Units 3–4; Outcome 1; Key knowledge; bullet 17; p. 102.

The learning target is a concise paraphrase. Aspire reference: aspire-mm-u34-o1-kk-17. This is an internal identifier, not an official VCAA code.

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