Solve problems using standardised scores and the empirical normal rule.

Key skills | Free preview

Learning target: Solve problems using standardised scores and the empirical normal rule.

A z-score expresses how many standard deviations an observation lies above or below its mean. It enables relative comparison across different scales. For an approximately normal distribution, about 68%, 95% and 99.7% lie within one, two and three standard deviations respectively. These model percentages require an appropriate bell-shaped distribution and are approximations.

Try the mathematics

Task 1. Scores are approximately normal with mean 60 and standard deviation 8. Find the z-score of 76, the approximate percentage below 76 and the approximate percentage between 52 and 68.

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-internal-gm-u34-o1-aos1-ks-05/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). General Mathematics; Units 3–4; Outcome 1; Key skills; Data analysis; bullet 5; p. 90.

The learning target is a concise paraphrase. Aspire reference: aspire-internal-gm-u34-o1-aos1-ks-05. This is an internal identifier, not an official VCAA code.

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