Distinguish exact and approximate technology results and understand rounding and precision.

Key knowledge | Free preview

Learning target: Distinguish exact and approximate technology results and understand rounding and precision.

Technology may offer exact symbolic output and a rounded decimal display for the same quantity. Decide which form the task requires, retain unrounded values for further calculations and apply the requested rounding only at the reporting stage. Checking a result by substitution can reveal accuracy lost through premature approximation or an inappropriate output setting.

Try the mathematics

Task 1. Use an exact-capable calculator/CAS to evaluate sqrt(50), then request a decimal. State the exact value and its approximation to three significant figures and three decimal places. Verify by squaring the exact form.

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-u1-o3-cross-kk-02/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). General Mathematics; Unit 1; Outcome 3; Key knowledge; bullet 2; p. 33.

The learning target is a concise paraphrase. Aspire reference: aspire-internal-gm-u1-o3-cross-kk-02. 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.