Exact substitution by hand

Key skills | Free preview

Learning target: Evaluate expressions and function rules by hand using exact integer, rational and irrational inputs.

Substitute the entire input wherever the variable appears, using brackets for negative or fractional numbers. Keep surds in exact form until an approximation is actually requested. Check that the input belongs to the rule’s real domain. Squaring a surd can simplify the expression, while a remaining surd should not be rounded prematurely.

Try the mathematics

Task 1. For $f(x)=2x^2-3x+1$, calculate $f(-2)$, $f(1/2)$ and $f(\sqrt{2})$ exactly.

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-ks-02/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Unit 1; Outcome 1; Key skills; bullet 2; p. 47.

The learning target is a concise paraphrase. Aspire reference: aspire-mm-u1-o1-ks-02. This is an internal identifier, not an official VCAA code.

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