Equivalent forms and their domains

Key skills | Free preview

Learning target: Explain differences between mathematical notation and technological expressions, including equivalent symbolic forms.

Symbolically equivalent expressions may display differently, but equivalence also depends on a shared domain. Cancelling a factor can hide an excluded point, and a typed expression can be misread without parentheses. Translate the tool output into formal mathematics, identify restrictions and test both an ordinary input and a boundary or excluded case.

Try the mathematics

Task 1. Compare the symbolic identities $\ln(e^x)=x$ and $e^{(\ln x)}=x$ in real-variable work. State their different domains and explain why a tool's simplified x output can hide a restriction.

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-o3-ks-08/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Units 3–4; Outcome 3; Key skills; bullet 8; p. 104.

The learning target is a concise paraphrase. Aspire reference: aspire-mm-u34-o3-ks-08. This is an internal identifier, not an official VCAA code.

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