Windows that reveal the relevant features

Key knowledge | Free preview

Learning target: Understand how graph-domain and range settings affect a technology display.

A graphing window controls what is visible without changing the mathematical function. A poor range can hide a zero, flatten a curve or cut off an important feature. Select windows with a purpose, compare them with algebra and a table, and record the actual settings so another person can interpret and reproduce the display.

Try the mathematics

Task 1. A plot of $f(x)=x\,e^{(-x)}$, $x\geq 0$, uses x from 2 to 6 and y from 0 to 0.3. Explain why it could mislead a student searching for the maximum. Choose a better window.

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-kk-03/

Study-design reference

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

The learning target is a concise paraphrase. Aspire reference: aspire-mm-u34-o3-kk-03. This is an internal identifier, not an official VCAA code.

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