Complete logarithmic and quartic sketches

Key skills | Free preview

Learning target: Sketch polynomials through degree four, natural-number powers, exponential graphs using standard key points, ln and log10 graphs, and simple transformations by hand.

A complete sketch combines the function’s domain, intercepts, asymptotes, turning behaviour and end behaviour. Calculating isolated features is only preparation for the drawing. Logarithmic graphs require attention to the argument’s sign, while repeated polynomial roots determine whether the axis is crossed or touched. Use derivative information where permitted to locate and classify stationary points.

Try the mathematics

Task 1. Sketch y=ln(x-1)+2. State the domain, range, asymptote and intercepts, and give three exact guide points.

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-o1-ks-05/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Units 3–4; Outcome 1; Key skills; bullet 5; p. 102.

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

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