Sine and tangent sketches

Key skills | Free preview

Learning target: Sketch the unit circle, sine, cosine and exponential graphs and Af(bx)+c variants by hand; also sketch tangent and log_a(x), showing applicable asymptotes.

For a sine or cosine graph, amplitude describes the vertical distance from the midline and period describes the horizontal repetition length. Tangent has no amplitude because it is unbounded; its asymptotes divide the graph into repeating branches. Construct a sketch from exact key points and asymptotes instead of relying on a calculator window alone.

Try the mathematics

Task 1. Sketch $y=2\sin(3x)-1$ for $0\leq x\leq 2\pi/3$. State the amplitude, period, midline and range, and mark five quarter-period 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-u2-o1-ks-01/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Unit 2; Outcome 1; Key skills; bullet 1; p. 55.

The learning target is a concise paraphrase. Aspire reference: aspire-mm-u2-o1-ks-01. This is an internal identifier, not an official VCAA code.

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