Know reciprocal circular functions and graphs, and circular functions restricted to suitable domains

Key knowledge | Free preview

Learning target: Know reciprocal circular functions and graphs, and circular functions restricted to suitable domains.

A reciprocal function inverts output values, whereas an inverse function reverses a one-to-one input-output relationship. A principal-domain restriction makes a circular function invertible. Domain exclusions and endpoint values determine the shape of the resulting graph, so establish them before drawing transformed examples.

Try the mathematics

Task 1. Use $y=\cos x$ to sketch $y=\sec x$ on $-2\pi \leq x \leq 2\pi$. Give excluded x-values, range, period and the effect of replacing sec x with 2sec x.

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/sm-u2-o1-kk-04/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Specialist Mathematics; Unit 2; Outcome 1; Key knowledge; bullet 4; p. 69.

The learning target is a concise paraphrase. Aspire reference: sm-u2-o1-kk-04. This is an internal identifier, not an official VCAA code.

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