Know the relationships for circular arc lengths and sector and segment areas

Key knowledge | Free preview

Learning target: Know the relationships for circular arc lengths and sector and segment areas.

Radians connect an angle directly with arc length. Sector area uses the same fraction of a full turn, while a minor segment removes the triangle formed by the two radii. Label the required region carefully so that an arc, sector and segment are not confused.

Try the mathematics

Task 1. A circle has radius 6 cm and a central angle π/3. Find its arc length, sector area and minor-segment area, giving exact answers with units.

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-03/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Specialist Mathematics; Unit 2; Outcome 1; Key knowledge; bullet 3; p. 69.

The learning target is a concise paraphrase. Aspire reference: sm-u2-o1-kk-03. This is an internal identifier, not an official VCAA code.

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