Understand the sine rule, its ambiguous case, and the cosine rule.

Key knowledge | Free preview

Learning target: Understand the sine rule, its ambiguous case, and the cosine rule.

The sine rule connects each side to the sine of its opposite angle. A sine value can correspond to an acute angle and its obtuse supplement, so an SSA data set may allow two triangles. Test both candidates using the angle sum and positivity. Do not discard the second angle merely because a calculator initially returns the principal acute value.

Try the mathematics

Task 1. A triangle has A=30°, side a=7 and side b=10, with sides opposite matching capital letters. Find every possible angle B and the corresponding angle C.

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-internal-gm-u2-o1-aos4-kk-04/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). General Mathematics; Unit 2; Outcome 1; Key knowledge; Space, measurement and applications of trigonometry; bullet 4; p. 39.

The learning target is a concise paraphrase. Aspire reference: aspire-internal-gm-u2-o1-aos4-kk-04. This is an internal identifier, not an official VCAA code.

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