Define sine and cosine for angles from 0 to 180 degrees.

Key knowledge | Free preview

Learning target: Define sine and cosine for angles from 0 to 180 degrees.

On a unit circle, the point at an angle measured anticlockwise from the positive horizontal axis has coordinates cosine and sine of that angle. This definition extends the right-triangle ratios beyond acute angles. In the second quadrant the vertical coordinate is positive and the horizontal coordinate is negative, determining the signs before any calculation.

Try the mathematics

Task 1. Use a 60° reference angle to find sin120° and cos120° exactly. Explain their signs using the unit-circle coordinates.

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-03/

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 3; p. 39.

The learning target is a concise paraphrase. Aspire reference: aspire-internal-gm-u2-o1-aos4-kk-03. This is an internal identifier, not an official VCAA code.

Free preview: share intact with attribution, without charging. Full resource rights are not included.

Original independent practice. Not published or endorsed by VCAA. The activity is not an official SAC, examination or complete treatment of every clause of a broad curriculum requirement.