Exact values from the unit circle

Key knowledge | Free preview

Learning target: Know unit-circle values of sine, cosine and tangent at 0, pi/6, pi/4, pi/3 and pi/2 and integer multiples, including degree equivalents.

On the unit circle, cosine is the horizontal coordinate and sine is the vertical coordinate. Use a reference angle and quadrant signs to obtain exact values outside the first quadrant. Tangent is sine divided by cosine and is undefined when cosine is zero. Keep special-angle values exact rather than converting them to rounded decimals.

Try the mathematics

Task 1. Give exact sine, cosine and tangent values at 5π/6 and 7π/4. State the corresponding degree angles and locate them on a unit-circle sketch.

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-kk-01/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). Mathematical Methods; Unit 2; Outcome 1; Key knowledge; bullet 1; p. 54.

The learning target is a concise paraphrase. Aspire reference: aspire-mm-u2-o1-kk-01. 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.