

Exam Practice Guide

Unit 2

Mathematical Methods Examination 2

Key Features:

- ✓ 114 original examination style questions on all examinable topics.
- ✓ Full solutions and a marking guide to all questions.
- ✓ Separated into key topic areas within each Area of Study, enabling students to master one topic at a time.
- ✓ Written by VCE assessors who mark the real examinations.
- ✓ Excellent resource for examination practice.

Helping VCE students be the best they can be.

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SAMPLE

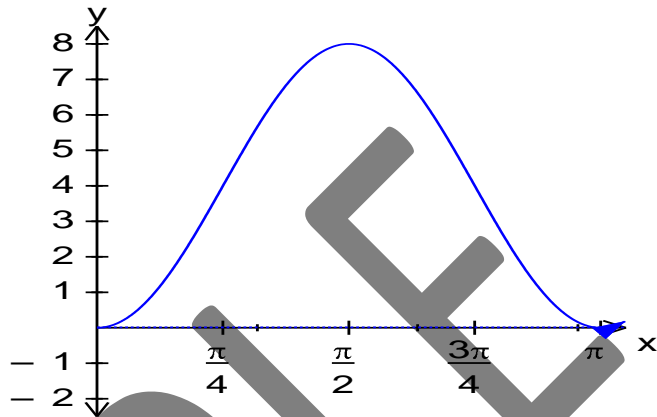
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AREA OF STUDY 1: Functions and Graphs**Topic 1: Circular Functions****Question 1**

The graph shown has the equation:

- A. $y = -4 \cos\left(\frac{1}{2}x\right) + 4$
- B. $y = -8 \cos(2x) + 8$
- C. $y = 8 \cos(x) + 4$
- D. $y = 4 \cos(x) + 4$
- E. $y = -4 \cos(2x) + 4$

**Question 2**

Determine the sum of the solutions to $\sqrt{3} \tan\left(\frac{3x}{2}\right) = 0, 0 \leq x \leq 4\pi$.

- A. 0
- B. 14π
- C. 42π
- D. $\frac{3\pi}{2}$
- E. $\frac{25\pi}{3}$

Question 3

The angle 600° is equivalent to:

- A. $\frac{30\pi}{2}$
- B. $\frac{10\pi}{3}$
- C. $\frac{2\pi}{3}$
- D. $\frac{2\pi}{30}$
- E. 10π

Question 4

What is the fifth solution in order of increasing value to $\sqrt{2} \sin 3x = -1$, $0 \leq x \leq 3\pi$?

- A. $\frac{5\pi}{4}$
- B. $\frac{7\pi}{4}$
- C. $\frac{13\pi}{4}$
- D. $\frac{13\pi}{12}$
- E. $\frac{17\pi}{12}$

Question 5

If $\cos \theta = 0.6$, then $\cos(3\pi - \theta)$ is:

- A. 0.4
- B. -0.6
- C. 0.6
- D. 0.0
- E. -0.4

Question 6

The function with the rule $y = -2 \sin\left(\frac{x}{4}\right)$ has an amplitude and a period respectively of:

- A. $2, \frac{\pi}{4}$
- B. $2, 8\pi$
- C. $-2, 8\pi$
- D. $2, \frac{\pi}{2}$
- E. $-2, \frac{\pi}{2}$