

# Exam Practice Guide

**Units 3 & 4**

**Mathematical Methods (CAS)**

**Examination 1**

**Key Features:**

- ✓ 47 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.

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***Helping VCE students be the best they can be.***

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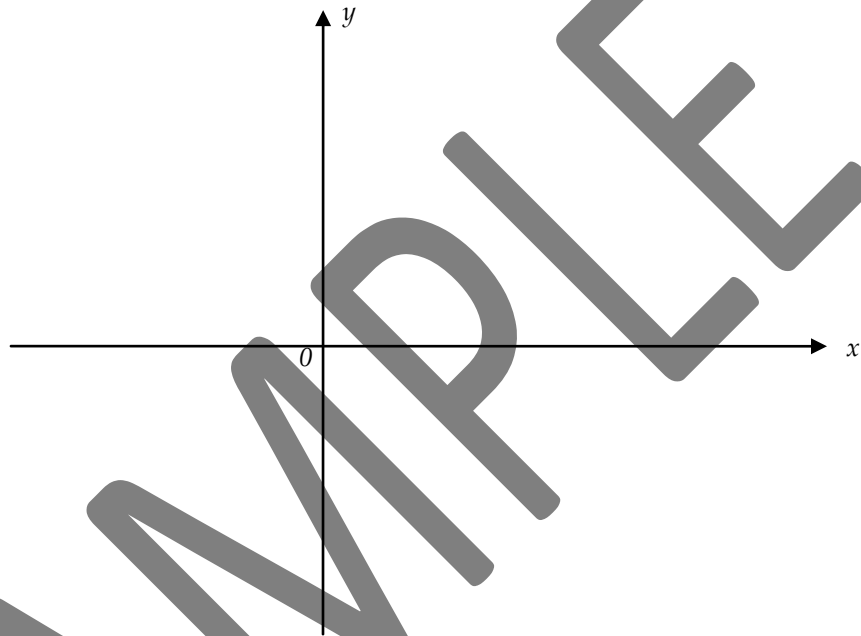
SAMPLE

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**AREA OF STUDY 1: Functions and Graphs****Topic 1 – Functions and their graphs****Question 1**

Sketch the graph of the function  $y = 3 - 2|x - 1|$  on the axes below.  
Label axes intercepts and the vertex with their coordinates.



3 marks

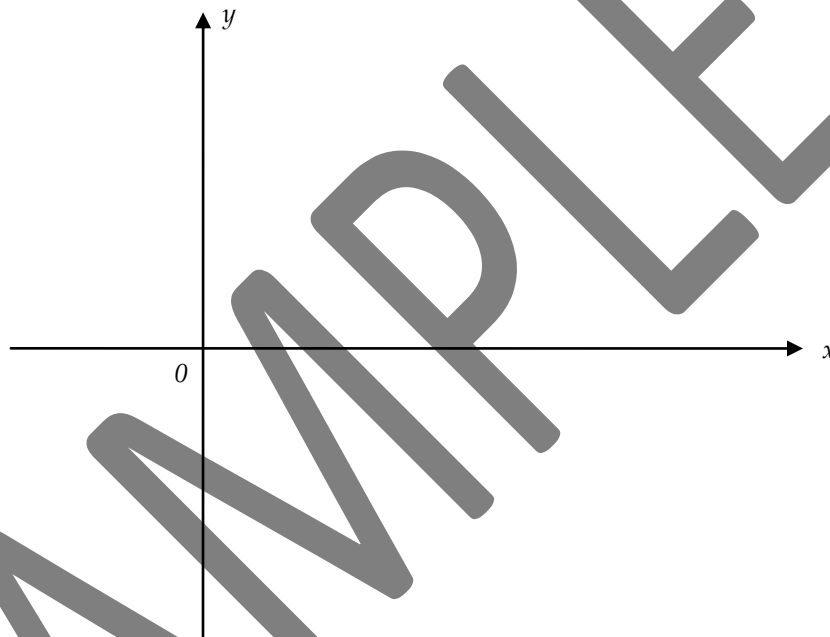
**Question 2**

- a. State the period and amplitude of the function  $f : [0,2] \rightarrow \mathcal{R}, f(x) = -4 \sin 3\pi x$ .

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- b. Sketch the graph of this function on the diagram provided, specifying scales on both axes and giving the coordinates of all turning points.



- c. Use calculus to determine the area of **one** of the regions lying between the graph and the x-axis.

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1 + 2 + 2 = 5 marks