TSSM™
Creating VCE Success

Exam Practice Guide

Unit 2
Mathematical Methods
Examination 1

Key Features:

- ✓ 48 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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CONTENTS

AREA OF STUDY 1: Functions and Graphs

Topic 1: Circular Functions

Question 1

For the function $f(x) = \frac{1}{2}\sin\left(6x\right)$

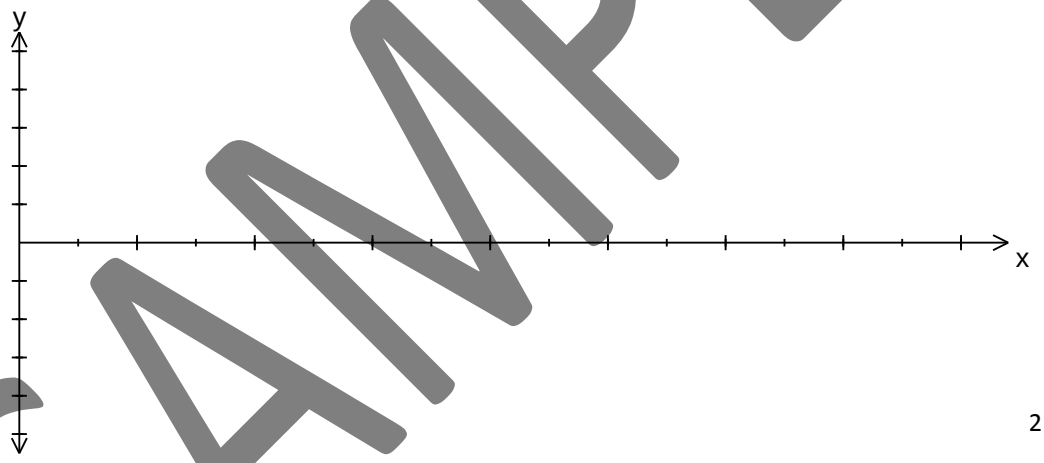
a. State the period and amplitude.

_____

_____

1 mark

b. Sketch the graph of $f(x) = \frac{1}{2}\sin\left(6x\right)$ for $x \in [0, \pi]$, label all axial intercepts.



2 marks

c. State the range of $y = f(x)$

_____

_____

1 mark

Question 2

For the function $f(x) = -3\cos\left(\frac{x}{2}\right)$

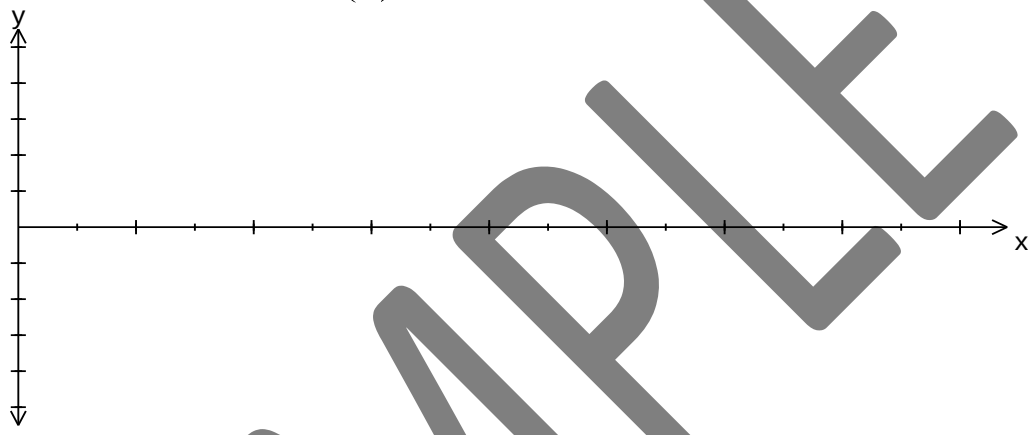
a. State the period and amplitude.

_____

_____

1 mark

b. Sketch the graph of $f(x) = -3\cos\left(\frac{x}{2}\right)$ for $x \in [0, 8\pi]$, label all axial intercepts.



2 marks

c. State the range of $y = f(x)$

_____

_____

1 mark

Question 3

For the function $f(x) = 2\tan(2x)$ where $x \in \left[-\pi, \pi\right]$

a. State the period.

_____

_____

1 mark

b. Find the equation(s) of the asymptote(s).

_____

_____

2 marks