



YEAR 12 Mathematics Half-Yearly Examination

Due Date: 15th March 2018 Thursday, Week 7, Period 3	Assessment Name: Half-Yearly Exam
Mark: /55	Weighting: 30% Length: 75 minutes

SYLLABUS OUTCOMES TO BE ASSESSED:

- H4 **Expresses** practical problems in mathematical terms based on simple given models
H5 **Applies** appropriate techniques from the study of calculus, geometry, probability, trigonometry and series to solve problems
H6 **Uses** the derivative to determine the features of the graph of a function
H7 **Uses** the features of a graph to deduce information about the derivative
H8 **Uses** techniques of integration to calculate areas and volumes
H9 **Communicates** using mathematical language, notation, diagrams and graphs
Note: Preliminary outcomes can be assessed in all HSC Tasks.

DIRECTIVES TO BE ASSESSED:

- | | |
|---------------------|---|
| Apply | To use, utilise, employ in a particular situation |
| Expresses | To change into mathematical terms |
| Solve | To find the value of an unknown pronumeral in an equation or inequality |
| Uses | To achieve a solution by using mathematical processes |
| Communicates | Chooses the correct way to give a mathematical answer |

TASK DESCRIPTION:

You will complete a 75 minute exam, with a five minutes reading time, covering the Mathematics topics listed below. Note Preliminary outcomes can be tested as a part of these topics.
The exam will involve 10 multiple choice questions and 3 extended response questions of equal value.
A board approved formulae sheet will be provided with your test paper.
The exam will consist of -
Section 1 – Ten multiple choice questions worth 10 marks (1 mark each)
Section 2 – Three extended response questions worth 45 marks (15 marks each)

The HSC topics assessed are:

- Differentiation - Ch2 and Prelim content
- Integration - Ch 3

Syllabus Reference:

- Geometrical applications of differentiation (10.1–10.8)
- Integration (11.1–11.4)
- Tangent to a Curve and Derivative of a Function (8.1 – 8.9)

Equipment required:

- Board approved scientific calculator
- Pens, ruler, pencils

This task will be completed under exam conditions.

ASSESSMENT CRITERIA – STUDENT CHECKLIST:

- Have you revised these topics?

- Do you have all the equipment?
- Are you familiar with the formula sheet and the formula you may need to learn?
- Have you completed the revision exercises from the Google classroom for revision?
- Have you attended Friday lunch time tutorials to get any extra help required?