



YEAR 12 General Mathematics 2

Trial HSC Examination 2018

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| Due Date: Monday 2 nd July 2018 9:20-11:55 Picton Hall | Assessment Name: Trial HSC Exam |
| Mark: $x/100$ | Weighting: 40 % |
| SYLLABUS OUTCOMES TO BE ASSESSED: MG2H-1 Uses mathematics and statistics to evaluate and construct arguments in a range of familiar and unfamiliar contexts MG2H-2 Analyses representations of data in order to make inferences, predictions and conclusions MG2H-3 Makes predictions about situations based on mathematical models, including those involving cubic, hyperbolic or exponential functions MG2H-4 Analyses two-dimensional and three-dimensional models to solve practical problems, including those involving spheres and non-right-angled triangles MG2H-5 Interprets the results of measurements and calculations and makes judgements about reasonableness, including the degree of accuracy of measurements and calculations and the conversion to appropriate units MG2H-6 Makes informed decisions about financial situations, including annuities and loan repayments MG2H-7 Answers questions requiring statistical processes, including the use of the normal distribution, and the correlation of bivariate data MG2H-8 Solves problems involving counting techniques, multistage events and expectation MG2H-9 Chooses and uses appropriate technology to locate and organise information from a range of contexts MG2H-10 Uses mathematical argument and reasoning to evaluate conclusions drawn from other sources, communicating a position clearly to others, and justifies a response Note: As up to 30% of the assessment mark submitted to the Board of Studies may be based on the Preliminary Mathematics General course. Any preliminary outcomes can be assessed. Refer to https://www.boardofstudies.nsw.edu.au/syllabus_hsc/pdf_doc/general-maths-a-and-r-stage6-from2013-general-2.pdf | |
| DIRECTIVES TO BE ASSESSED: Analyse: To identify causes, key factors, relationships and possible results. Answer: To provide a written reply or response to a question. Choose: To select items or answer from a collection of values. Construct: To draw a shape, line or angle accurately using a compass, ruler or geometrical instruments. Evaluate: To make a judgement based on criteria; determine the value of. Interpret: To draw meaning from a mathematical situation. Justify: To provide evidence to support your solution. Makes: To produce; cause to exist or happen; bring about Predict: To make an educated guess about future events. Reasoning: To use logical thinking to make sense of a situation or idea. Solve: To find the answer to or explanation for effectively dealing with a problem. Use: To manipulate something for a particular purpose to solve mathematical problems. | |

TASK DESCRIPTION:

You will complete a two-and-a-half-hour examination, with a five minutes reading time, covering all coursework studied in the General 2 Mathematics HSC and General Mathematics Preliminary courses listed below. Note Preliminary outcomes can be tested as a part of this exam. The exam will involve 25 multiple choice questions and 5 extended response questions.

A board approved formulae sheet will be provided with your exam paper.

Section 1 - 25 multiple choice questions are worth 25 marks in total. (1 mark each)

Section 2 – 5 extended response questions are worth 75 marks in total. (15 Marks each)

The topics assessed are:

HSC Course

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| AM3 | Further algebraic skills and techniques |
| AM4 | Modelling linear relationships |
| AM5 | Modelling non-linear relationships |
| DS4 | Interpreting sets of data |
| DS5 | The normal distribution |
| DS6 | Sampling and populations |
| FM4 | Credit and borrowing |
| FM5 | Annuities and loan repayments |
| MM4 | Further applications of area and volume |
| MM5 | Applications of trigonometry |
| FSRe1 | Water availability and usage |
| FSRe2 | Dams, land and catchment areas |
| FSRe3 | Energy and sustainability |

Preliminary Course up to 30% of the assessment mark

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| AM1 | Algebraic manipulation |
| AM2 | Interpreting linear relationships |
| FM1 | Earning and managing money |
| FM2 | Investing Money |
| FM3 | Taxation |
| DS1 | Statistics and society, data collection and sampling |
| DS2 | Displaying and interpreting single data sets |
| DS3 | Summary statistics |
| MM1 | Units of measurement and applications |
| MM2 | Applications of perimeter, area and volume |
| MM3 | Similarity of two-dimensional figures, right-angled triangles |
| PB1 | Relative frequency and probability |
| FSCo1 | Mobile phone plans |
| FSCo2 | Digital download and file storage |
| FSDr1 | Costs of purchase and insurance |
| FSDr2 | Running costs and depreciation |
| FSDr3 | Safety |

Recommended equipment:

- Board approved scientific calculator
- Pens, ruler, pencils

ASSESSMENT CRITERIA – STUDENT CHECKLIST:

Have you:

- Revised the following topics by completing Exercises, Chapter Reviews, Cumulative Chapter Reviews and ensuring you have referenced syllabus documents:
 - Y12 (HSC textbook)
 - Y11 (Preliminary textbook)
- Attended Maths help on Fridays if needed
- Created your own topic summaries
- Caught up incomplete or missed work
- Completed all set homework, including past HSC questions
- Utilised online revision activities
- Completed generated HSC Online multiple choice questions on the Board of studies website.

Refer to: <http://mcq.bostes.nsw.edu.au/course/higher-school-certificate/general-mathematics/>

