



## YEAR 12 HSC Extension 2 Mathematics

### Half-Yearly Examination 2018

<b>Due Date:</b> 9 <sup>th</sup> March 2018 Friday Week 6	<b>Assessment Name:</b> Half-Yearly Examination
<b>Mark:</b> /35	<b>Weighting:</b> 30% <b>Length:</b> 70 minutes

#### SYLLABUS OUTCOMES TO BE ASSESSED:

- E1 **Appreciates** the creativity, power and usefulness of mathematics to **solve** a broad range of problems  
E2 **Chooses** appropriate strategies to **construct** arguments and proofs in both concrete and abstract settings  
E3 **Uses** the relationship between algebraic and geometric representations of complex numbers  
E4 **Uses** efficient techniques for the algebraic manipulation required in dealing with questions such as those involving polynomials  
E6 **Combines** the ideas of algebra and calculus to **determine** the important features of the graphs of a wide variety of functions

#### DIRECTIVES TO BE ASSESSED:

- Uses** To achieve a solution by using mathematical processes  
**Appreciates** To understand fully, grasp the full meaning of  
**Determines** To establish exactly by calculation  
**Evaluates** To find a numerical expression or equivalent for an equation, formula, or function  
**Communicates** To share or exchange information or ideas  
**Solve** To find the answer to mathematical problems  
**Choose** To select from a number of possibilities; pick by preference  
**Combine** To join or merge to form a single unit

#### TASK DESCRIPTION:

You will complete a 70 minute exam, with a five minutes reading time, covering the Extension 2 Mathematics topics listed below. Note Preliminary outcomes will be tested as a part of these topics.  
A board approved formulae sheet is permissible.

#### The exam will consist of -

Mixed questions to a total of 35 marks

#### The topics assessed are:

- Complex Numbers
- Curve Sketching
- Polynomials
- Harder Applications of Extension 1 Topics

#### Equipment required:

- Board approved scientific calculator
- Pens, ruler, pencils

#### ASSESSMENT CRITERIA - STUDENT CHECKLIST:

- Have you revised these topics?
- Do you have all the equipment?
- Are you familiar with the formulae sheet and formulae you may need to learn?

