



**Bowral High Mathematics Faculty**

**Course Information, Assessment & Reporting**

**HSC Mathematics Extension 1**

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
<b>Term 4</b> Year 11	<b>Mathematical Induction</b>			<b>Polynomials – Iterative solutions</b>				<b>Extension Calculus &amp; Graphs</b>	<b>Task 1 assess week all courses - no classes</b>	<b>activity week - no lessons</b>
<b>Term 1</b> Year 12	<b>Binomial Theorem</b>					<b>Further Integration</b>			<b>Task 2 Week 9</b>	<b>Consolidat -ion &amp; Revision</b>
<b>Term 2</b>	<b>Harder 2 Unit Examples</b>		<b>Further Trigonometry &amp; Calculus</b>				<b>Inverse Trigonometry Functions</b>		<b>Task 3 Trial HSC</b>	
<b>Term 3</b>	<b>Inverse Trigonometry Functions Cont'd</b>			<b>Physical Calculus</b>			<b>Task 4 Week 7</b>	<b>Extension Probability</b>		

**Assessment**

The rules for HSC Mathematics Extension 1 are as set out in the Bowral High School HSC Course Assessment Guide. Students should familiarise themselves with these rules. The assessment program for Mathematics Extension 1 is set out in the table below:-

### Mathematics Extension 1 Assessment Task Schedule

<b>COURSE: HSC MATHEMATICS Extension 1</b>						
Outcomes	Components	Weighting	Task 1	Task 2	Task 3	Task 4
			Term 4 Week 9	Term 1 Week 9	Term 2 Week 9/10	Term 3 Week 7
			Work Samples and Revision Test	Work Samples and Revision Test	Trial HSC	Work Samples and Revision Test
HE1-HE7	Knowledge, understanding and skills	70	15	15	25	15
HE1-HE7	Reasoning, interpretative, explanatory and communicative abilities	30	5	5	15	5
	Marks	100	20	20	40	20

#### Reporting

A student progress report will be provided after the mid-course exam and at the end of the course. The report for each student will show:-

1. A Grade indicating the level of achievement in each area studied during the assessment period. These Grades will be based on the individual student's achievement in the course. The areas of assessment in HSC Mathematics Extension 1 are:-

#### HSC Extension 1 Mathematics – mid-course

- Uses inductive reasoning in the construction of proofs
- Understands the relationship between the derivative and the features of the graph of functions with horizontal and vertical asymptotes
- Determines integrals by reduction to a standard form through a given substitution
- Evaluates mathematical solutions to problems and communicates them in an appropriate form

#### HSC Extension 1 Mathematics – Final Report

- Appreciates interrelationships between ideas drawn from different areas of mathematics
- Uses the relationship between functions, inverse functions and their derivative

- Applies appropriate techniques from the study of calculus and trigonometry to solve harder problems
- Evaluates mathematical solutions to problems and communicates them in an appropriate form

**The grades awarded will be: Outstanding, High, Sound, Basic, Limited, N** (fails to meet course requirements in the HSC Certificate), **n/a** (If the student was not at BHS for this work)

2. A personal profile for responsible learning, using the categories; **Always, Usually, Sometimes, Rarely.**
  - Brings required equipment to class / is prepared
  - Listens attentively and follows instructions
  - Participates positively in class and discussions
  - Interacts positively with teachers and students
  - Works independently and is self motivated
  - Meets homework/assignment deadlines
3. An indication of the number of lessons missed by the student.
4. Confirmation that the student is meeting course requirements for the HSC Certificate in Mathematics Extension 1.
5. Teacher comment.

### Special Notes

- **Homework** will be given on a regular basis and its completion and follow-up is considered to play an important part in building student confidence and skills in Mathematics.
- **Calculators** and their effective use are an essential part of senior Mathematics Courses and all students are required to have a scientific calculator with them in every mathematics lesson and for all assessment tasks. We strongly recommend you purchase a calculator through the Finance Office at Bowral High where we sell an approved calculator **at cost price**. This calculator is suitable for use through to Year 12 and beyond. Calculators purchased elsewhere may not have the required features.
- **Calculators may be used in all assessment tasks and in the HSC Examination in Mathematics Extension 1.**
- **Geometry Equipment:** All students are expected to have a set of geometrical instruments consisting of a pair of compasses, a protractor, a setsquare, a ruler and a pencil. At the moment a geometry set is offered free as a bonus item with the purchase of a calculator through the Finance Office (see above).
- If, at any time, you would like to discuss your child's progress in Mathematics you may contact their Mathematics Teacher or Mr Reynolds, on 48612255.

**M. Reynolds - Head Teacher Mathematics**