

# CHRISTCHURCH BOYS' HIGH SCHOOL

## YEAR 12MTA MATHEMATICS 2010

- Students will work towards their National Certificate of Educational Achievement.
- 22 credits, of the 80 required for Level 2 of the NCEA, may be achieved in the Mathematics course.
- 7 separate Achievement Standards and 1 Unit Standard make up these 22 credits.
- Each Achievement Standard is assessed separately.
- Achievement Standards can be passed at Achieved, Merit or Excellence levels or Not Achieved. Unit Standards can be Achieved or Not Achieved.
- 2 of the topics are internally assessed and 6 are externally assessed, by examinations in November.

The table shows the Level 2 Achievement/Unit Standards, the number of credit points each is worth and whether they are internally or externally assessed.

AS/US	Title	Credits	Assessment Mode
2.1	Manipulate algebraic expressions and solve equations	4	External
2.2	Sketch and interpret non-linear graphs	3	External
2.3	Find and use straightforward derivatives and integrals	4	External
2.4	Solve problems using a coordinate geometry method	2	External
2.6	Simulate probability situations, and apply the normal distribution	2	Internal
2.7	Solve straightforward problems involving sequences	2	External
5251	Solve practical trigonometry problems	3	Internal
2.9	Solve straightforward trigonometric equations	2	External

**Note:** The Statistics work done in year 12 will not be tested for NCEA credits. Testing will be done, however, and the results will be used to ascertain suitability for the Year 13 Statistics course.

### ENTRY TO YEAR 13 MATHEMATICS AND LEVEL 3 NCEA

- Entry to the Maths With Calculus course will probably require Achieved, or better, in:  
2.1 Algebra, 2.2 Graphs, 2.3 Calculus, 2.4 Coordinate Geometry and both 5251 and 2.9 Trigonometry.
- Entry to the Mathematics With Statistics course will probably require Achieved, or better, in:  
2.1 Algebra, 2.6 Probability and 2.7 Sequences and success in the Statistics test.
- Special cases will be considered on their merit by the H.O.D. Maths.  
The basis of all considerations would be whether the student has displayed and achieved the skills necessary to handle the Level 3 course content. The Level 2 Achievement Standards that have been achieved and the level of achievement will be considered.

### ASSESSMENT

Students must comply with the regulations set done in the C.B.H.S. assessment policy.

Internally Assessed Achievement Standards: *Probability AS 2.6 and Trigonometry US 5251.*

- There will be no re-assessment opportunity for AS 2.6 and one for US 5251.
- Practice assessments will be done in class time to prepare for the one assessment opportunity.
- Students who miss the assessment for a valid, verifiable, reason will have a chance to do the assessment at a later date.

### Externally Assessed Achievement Standards.

- Teachers may give a practice assessment following each completed topic.
- There will be a 3 hour practice examination in the term 3 Examination block. This will cover all the standards done up to that time.
- The purpose of this examination is to prepare for the November examinations and to gather data should a student miss the November examination and apply for compassionate consideration.

Additionally students who perform well in this exam will be guaranteed entry into a Y13 Maths course. Students will be informed of the specific criteria required later in the year.

### Assessment Timetable

#### *Internally assessed Achievement Standards*

Trigonometry      Week 5 of Term 1  
Probability        Exam Block – week 8/9 of Term 3

#### *Externals – practice tests*

After each topic has been concluded

Examination – Term 3 Examination block.

### **APPEALS:**

Pupils may make an appeal over their grade for an internally assessed Achievement Standard, within 7 days of the assessment task being returned to them.

The appeal should be made to the class teacher who may refer it to the teacher in charge of year 11 Mathematics or the H.O.D. Mathematics for adjudication.

Work written in pencil or containing "white-out" corrections will not be subject to appeals.

An explanation of the adjudication decision will be made to the student.

### **TEACHING TOPIC ORDER/TIMELINE**

1.	Algebra	(A.S. 2.1 external)
2.	Trigonometry	<b>(U.S. 5251 internal)</b>
3.	Coordinate Geometry	(A.S. 2.4 external)
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	Coordinate Geometry continued	
4.	Graphs	(A.S. 2.2 external)
5.	Calculus	(A.S. 2.3 external)
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	Calculus continued	
6.	Trigonometrical Equations	(A.S. 2.9 external)
7.	Probability	<b>(A.S. 2.6 internal)</b>
8.	Sequences	(A.S. 2.7 external)
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9.	Statistics (if time – there probably won't be)	

### **APPROACH TO THE YEAR:**

With standards based assessment, where student performance is measured against specific criteria, students must be precise and accurate. Marks are not totalled. Markers will be looking for correct working and answers to specific questions, for each of Achieved, Merit and Excellence levels. Hence careless errors will be far more costly than previously.

Students who work steadily in class, do regular homework and revise thoroughly for assessments will give themselves every chance of success.