



School Certificate Mathematics Test Scope Statement

Nature of Test and Test Structure

The Mathematics Test for the School Certificate from 1998 is based on the outcomes related to the objectives of all three courses (Advanced, Intermediate, Standard) of the Stage 5 Syllabus *Mathematics Years 9-10* (implemented in 1997), particularly the objective 'Working Mathematically'. The outcomes for this objective 'knowledge, understanding and skills in Working Mathematically' relate to 'the important and overarching skills that are expected to be achieved by students while undertaking the learning experiences in each of the six strands'¹ of the stated core of the Syllabus.

Skills embedded in the outcomes for 'Working Mathematically' across the three courses of the Syllabus include:

- estimating the results of calculations and checking the reasonableness of results
- using appropriate technology
- selecting and using appropriate mathematical techniques
- interpreting and using mathematical information presented in a variety of forms
- using appropriate problem-solving strategies
- interpreting the results of problem solutions in different contexts, and
- communicating mathematical knowledge and understanding.

The test, therefore, provides a measure of student achievement in relation to foundation skills, knowledge and understanding and could also provide a measure of student achievement in relation to the Key Competency 'Using Mathematical Ideas and Techniques'. In addition, it reflects skills that are essential in Mathematics for further study and a range of possible vocational directions.

The test's purpose is to assess knowledge, understanding and skills valued in Mathematics across the designated content areas and beyond those related to specific content.

Student achievement in relation to the full range of outcomes for the Advanced, Intermediate and Standard courses is assessed by schools through their own assessment programs using the Course Performance Descriptors written for this purpose.

¹ Syllabus - Intermediate course, page 27

Students are not excluded from attempting a question part in the School Certificate Mathematics Test because the particular course they have studied does not give them access to certain content. They may be limited, however, by their ability to manipulate or communicate the more complex material.

The test is of two hours total working time and consists of two separate sections. Section 1 represents one quarter of the working time (30 minutes) and does not allow the use of calculators. Number sense and mental computation are fundamentals emphasised in this section and questions do not address mathematical operations where the use of a calculator would be the most appropriate choice of method. Section 1 has 25 one-mark free response questions.

Section 2 represents three quarters of the working time ($1\frac{1}{2}$ hours) and allows the use of silent (except in approved cases for blind candidates), battery or solar-powered, hand-held calculators.

Part A of Section 2 consists of 50 multiple-choice questions. Part B of Section 2 is worth 25 marks and contains nine questions. The first five questions, worth one mark each, are multiple-choice questions that may have more than one correct answer. The next four questions, worth five marks each, are free-response questions of a problem-solving nature.

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Specifications

The Mathematics Test will consist of two written sections of 2 hours total working time. Candidates will be allowed 30 minutes working time on Section 1 and 90 minutes working time on Section 2.

A short break will be allowed following the expiry of working time for Section 1. During this period responses to Section 1 will be collected and preparations made for the commencement of Section 2. Students are to remain seated in the Examination Room during this period.

Section 1 (25 marks)

Calculators are not to be used.
All questions will be in free-response format.
All questions are compulsory.
All questions are of equal value.
All answers to this section must be written in the spaces provided in the test paper.

Section 2 (75 marks)

Calculators may be used.
All questions are compulsory.
The section will consist of two parts, A and B.

Part A (50 marks)

All questions will be in single-answer multiple-choice format.
All answers to this part must be recorded on the answer sheet provided.

Part B (25 marks)

There will be NINE questions.
The first FIVE questions are worth 1 mark each and are multiple-choice questions that may have more than one correct answer.
The next FOUR questions are worth 5 marks each and require free-response answers.
All answers to this part must be written in the spaces provided in the test paper.