

HONG KONG DIPLOMA OF SECONDARY EDUCATION
MATHEMATICS

INTRODUCTION

The public assessment of this subject is based on the New Senior Secondary Curriculum and Assessment Guide (Secondary 4–6) Mathematics jointly prepared by the Curriculum Development Council and the Hong Kong Examinations and Assessment Authority. Candidates have to refer to the Guide for the knowledge, understanding, skills and attitudes they are required to demonstrate in the assessment.

ASSESSMENT OBJECTIVES

The assessment objectives of the Compulsory Part are to test the candidates’:

1. knowledge of the mathematical facts, concepts, skills and principles presented in the Curriculum and Assessment Guide;
2. familiarity with and use of mathematical symbols;
3. ability to use appropriate mathematical techniques for solving a variety of problems; and
4. ability to communicate ideas and to present arguments mathematically.

The assessment objectives of Module 1 (Calculus and Statistics) are to test the candidates’:

1. understanding of the concepts, principles and methods in Calculus and Statistics presented in the Curriculum and Assessment Guide; and
2. ability to apply appropriate techniques in Calculus and Statistics for solving a variety of problems.

The assessment objectives of Module 2 (Algebra and Calculus) are to test the candidates’:

1. understanding of the concepts, principles and methods in Algebra and Calculus presented in the Curriculum and Assessment Guide; and
2. ability to apply appropriate techniques in Algebra and Calculus for solving a variety of problems.

MODE OF ASSESSMENT

The mode of public assessment in the Compulsory Part is shown below:

Component		Weighting	Duration
Public Examination	Paper 1 Conventional questions	55%	2¼ hours
	Paper 2 Multiple-choice questions	30%	1¼ hours
School-based Assessment (SBA)		15%	

The mode of public assessment in Module 1 (Calculus and Statistics) is shown below:

Component		Weighting	Duration
Public Examination	Conventional questions	100%	2½ hours

The mode of public assessment in Module 2 (Algebra and Calculus) is shown below:

Component		Weighting	Duration
Public Examination	Conventional questions	100%	2½ hours

PUBLIC EXAMINATION

Compulsory Part

The examination will consist of two papers:

Paper 1 ($2\frac{1}{4}$ hours) (55%)

This paper will consist of two sections in which all the questions are to be attempted. Section A will consist of questions on the Foundation Topics of the Compulsory Part together with the Foundation Part of the Secondary 1-3 Mathematics Curriculum. Section B will consist of questions on the Compulsory Part together with the Foundation Part and the Non-Foundation Part of the Secondary 1-3 Mathematics Curriculum. Section A will further be divided into two parts. Section A(1) (35 marks) will consist of 8 to 11 elementary questions. Section A(2) (35 marks) will consist of 4 to 7 harder questions. Section B (35 marks) will consist of 4 to 7 questions.

Paper 2 ($1\frac{1}{4}$ hours) (30%)

This paper will consist of two sections in which all the questions are to be attempted. Section A ($\frac{2}{3}$ of the paper mark) will consist of questions on the Foundation Topics of the Compulsory Part together with the Foundation Part of the Secondary 1-3 Mathematics Curriculum. Section B ($\frac{1}{3}$ of the paper mark) will consist of questions on the Compulsory Part together with the Foundation Part and the Non-Foundation Part of the Secondary 1-3 Mathematics Curriculum. All questions in the paper will be multiple-choice questions.

- Notes:
1. Candidates are not expected to perform lengthy manipulations.
 2. In calculations candidates are expected to give answers to appropriate degrees of accuracy.
 3. Electronic calculators and mathematical drawing instruments may be used in the examination.
 4. SI and metric units will be used in the examination wherever appropriate.
 5. Candidates should note the common notations to be used in mathematics examination papers.

Module 1 (Calculus and Statistics)

The examination will consist of one paper of $2\frac{1}{2}$ hours' duration. The paper will be divided into two sections in which all the questions are to be attempted. Section A (50 marks) will consist of 8-12 short questions. Section B (50 marks) will consist of 3-5 long questions.

- Notes:
1. Knowledge of the subject matter in the Compulsory Part together with the Foundation Part and the Non-Foundation Part of Secondary 1-3 Mathematics Curriculum is assumed.
 2. In calculations candidates are expected to give answers to appropriate degrees of accuracy.
 3. Electronic calculators and mathematical drawing instruments may be used in the examination.
 4. Statistical tables will be printed in the question paper where appropriate.
 5. SI and metric units will be used in the examination wherever appropriate.
 6. Candidates should note the common notations to be used in mathematics examination papers.

Module 2 (Algebra and Calculus)

The examination will consist of one paper of $2\frac{1}{2}$ hours' duration. The paper will be divided into two sections in which all the questions are to be attempted. Section A (50 marks) will consist of 8-12 short questions. Section B (50 marks) will consist of 3-5 long questions.

- Notes:
1. Knowledge of the subject matter in the Compulsory Part together with the Foundation Part and the Non-Foundation Part of Secondary 1-3 Mathematics Curriculum is assumed.
 2. Electronic calculators and mathematical drawing instruments may be used in the examination.
 3. Candidates should note the common notations to be used in mathematics examination papers.

SCHOOL-BASED ASSESSMENT (SBA)

The Public Examination and the SBA component of the Compulsory Part will constitute 85% and 15% of the total weighting of the Public Assessment respectively. To allow sufficient time for teachers to familiar themselves with the administration of the SBA in the Compulsory Part, the following strategy for phasing it in will be adopted:

Year of examination	Implementation of SBA
2012	Schools are not required to submit SBA marks. Public examination results constitute 100% of the final subject result.
2013	Schools are not required to submit SBA marks. Public examination results constitute 100 % of the final subject result.
2014	All schools have to submit SBA marks for feedback from the HKEAA on the outcomes of moderation. Public examination results constitute 100% of the final subject result.
2015	All schools have to submit SBA marks for feedback from the HKEAA on the outcomes of moderation. Public examination results constitute 100% of the final subject result.
Starting from 2016, all schools have to submit SBA marks contributing 15% of the final subject results.	

In the Compulsory Part, students will be required to complete two assessment tasks: one in Secondary 5 and the other in Secondary 6. These tasks will be more extended in nature than the questions in traditional tests and examinations, and should provide opportunities for students to demonstrate their competence in the following skills and abilities, which are embodied in the curriculum objectives:

1. applying mathematical knowledge to solve problems;
2. reasoning mathematically;
3. handling data and generating information; and
4. using mathematical language to communicate ideas.

The assessment tasks can be in the form of written assignments or even practical tasks, and will be conducted mainly in school under teacher supervision. A wide variety of types of tasks can be adopted for assessment purposes, including, for instance, mathematical investigations and solving more sophisticated problems in real-life situations or with mathematics itself.

It is proposed that the required assessment tasks are:

1. one task on mathematical investigation or problem-solving; and
2. one task on data handling.

- Notes:
1. The SBA marks submitted by a school should reflect the rank order of its candidates as well as the relative differences between candidates' achievements. The SBA marks submitted by schools will be moderated to provide comparability in the system of School-based Assessment.
 2. The detailed requirements, regulations, assessment criteria and guidelines will be provided in the SBA Handbook for HKDSE Mathematics published by the Hong Kong Examinations and Assessment Authority. These details will be made known to schools in 2009 so that they can start practising SBA before it is formally implemented.
 3. For School-based Assessment, candidates are required to keep records of their assessment tasks for inspection and authentication purposes until the publication of the HKDSE examination results.