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Mathematics

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ELEMENTARY MATHEMATICS

<table>
<tr><th>COURSE</th><th>G3</th><th>G2</th><th>G1</th></tr>
<tr><td>SUBJECTS OFFERED</td><td>• Elementary Math (Compulsory)
• Additional Math(SOE Option)
• Computing (SOE Option)</td><td>Elementary Math (Compulsory)</td><td>Elementary Math (Compulsory)</td></tr>
<tr><td>ASSESSMENT FORMAT</td><td>Elementary Math:
<table>
<tr><th>Paper</th><th>Duration</th><th>Description</th><th>Marks</th><th>Weighting</th></tr>
<tr><td>Paper 1</td><td>2 hours
15 minutes</td><td>There will be about 26 short answer questions.
Candidates are required to answer all questions.</td><td>90</td><td>50%</td></tr>
<tr><td>Paper 2</td><td>2 hours
15 minutes</td><td>There will be 9 to 10 questions of varying marks and lengths.
The last question in this paper will focus specifically on applying mathematics to a real-world scenario.
Candidates are required to answer all questions.</td><td>90</td><td>50%</td></tr>
</table></td><td>Elementary Math:
<table>
<tr><th>Paper</th><th>Duration</th><th>Description</th><th>Marks</th><th>Weighting</th></tr>
<tr><td>Paper 1</td><td>2 hours</td><td>There will be about 23 short answer questions. Candidates are required to answer all questions.</td><td>70</td><td>50%</td></tr>
<tr><td>Paper 2</td><td>2 hours</td><td>Section A:
There will be 9 – 10 questions of varying marks and lengths.

The last question in this section will focus specifically on applying mathematics to a real-world scenario. Candidates are required to answer all questions.

Section B:
There will be 2 questions of which candidates will be required to answer only one.
• The questions in this section will be based on the underlined content and there will be one question from the 'Geometry and Measurement' strand and one from the 'Statistics and Probability' strand.
• Each question carries the same number of marks, that is, either 7 or 8 marks.</td><td>70</td><td>50%</td></tr>
</table></td><td>Elementary Math:
<table>
<tr><th>Paper</th><th>Duration</th><th>Description</th><th>Marks</th><th>Weighting</th></tr>
<tr><td>Paper 1</td><td>1 hour
30 minutes</td><td>There will be 11–13 short answer questions of 2–4 marks each, largely context-free and testing fundamental concepts and skills, followed by 2 longer questions of 6–8 marks, developed around a context.

Candidates are required to answer all questions which will cover topics from the following strands
• Number and Algebra
• Geometry and Measurement</td><td>50</td><td>50%</td></tr>
<tr><td>Paper 2</td><td>1 hour
30 minutes</td><td>There will be 11–13 short answer questions of 2–4 marks each, largely context-free and testing fundamental concepts and skills, followed by 2 longer questions of 6–8 marks, developed around a context.

Candidates are required to answer all questions which will cover topics from the following strands
• Number and Algebra
• Statistics and Probability</td><td>50</td><td>50%</td></tr>
</table></td></tr>
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ADDITIONAL MATHEMATICS

<table>
<tr><th>COURSE</th><th>G3</th></tr>
<tr><td>SUBJECTS OFFERED</td><td>

Elementary Math (Compulsory)
Additional Math(SOE Option)
Computing (SOE Option)

</td></tr>
<tr><td>ASSESSMENT FORMAT</td><td>
Additional Mathematics:
<table>
<tr><th>Paper</th><th>Duration</th><th>Description</th><th>Marks</th><th>Weighting</th></tr>
<tr><td>Paper 1</td><td>2 hours
15 minutes</td><td>There will be 12 – 14 questions of varying marks and lengths, up to 10 marks per question.

Candidates are required to answer ALL questions.</td><td>90</td><td>50%</td></tr>
<tr><td>Paper 2</td><td>2 hours
15 minutes</td><td>There will be 9 – 11 questions of varying marks and lengths, up to 12 marks per question.

Candidates are required to answer ALL questions.</td><td>90</td><td>50%</td></tr>
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COMPUTING

<table>
<tr><th>COURSE</th><th>G3</th></tr>
<tr><td>SUBJECTS OFFERED</td><td>

Elementary Math (Compulsory)
Additional Math(SOE Option)
Computing (SOE Option)

</td></tr>
<tr><td>ASSESSMENT FORMAT</td><td>
<table>
<tr><th>Paper</th><th>Mode</th><th>Duration</th><th>Weighting</th><th>Marks</th><th>Format</th><th>Modules Assessed</th></tr>
<tr><td>1</td><td>Written</td><td>2 h</td><td>60%</td><td>80</td><td>A mixture of
Multiple choice questions (single- and multiple-answer)
Short-answer questions
Matching questions
Cloze passages
Structured questions</td><td>All the five modules</td></tr>
<tr><td>2</td><td>Lab-based</td><td>2 h 30 m</td><td>40%</td><td>70</td><td>One question on Spreadsheets
Four to five questions on Programming</td><td>Module 2: Algorithms and Programming

Module 3: Spreadsheets</td></tr>
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</td></tr>
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	Additional Math	Computing
CRITERIA, DESIRED DISPOSITIONS	• Strong interest in the relevance of Mathematics, curious about how Mathematics can be applied to authentic scenarios. • Keen on exploring Mathematics or Mathematics-related course in post-secondary education • **Good Pass in Sec 2 Mathematics**	• Strong interest in and enthusiasm for programming • **Good Pass in Sec 2 Mathematics & EL** • **Based on academic merit and available vacancies**
SKILLS & COMPETENCIES TO BE DEVELOPED	• Confidence and interest in relevance of Mathematics • Critical thinking, reasoning, communication, application and metacognitive skills through a Mathematical approach to problem solving • Connect ideas within Mathematics and to other disciplines, through application of Mathematical thinking and approaches	• Apply logical reasoning and algorithmic thinking in analysing problem situations and developing solutions • Construct simple programs through the use of appropriate programming language(s) • Understand how and where information communications technology (ICT) is used in daily life • Understand and explain the ethical, social and economic issues associated with the use of ICT

	Additional Math	Computing
POST-SECONDARY OPPORTUNITIES	• Builds strong foundation for H2 Math in JC*/MI, STEM & STEM-related Poly courses **Students who intend to take H2 Math in JC will be assumed to have knowledge and understanding of G3 Additional Math.*	• Builds strong foundation for Computing/IT related courses in JC or Poly • Provides exposure and foundation for students interested in pursuing a career in data analytics/Fintech, etc.