2024 SOE MATH

JURONG SECONDARY SCHOOL
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<table>
<tr><th>COURSE</th><th>EXPRESS</th><th>NORMAL (ACADEMIC)</th><th>NORMAL (TECHNICAL)</th></tr>
<tr><td>SUBJECTS OFFERED</td><td>Mathematics (Compulsory)
Additional Math
Computing</td><td>Mathematics (Compulsory)
Additional Math (By Offer)</td><td>Mathematics (Compulsory)</td></tr>
<tr><td>ASSESSMENT FORMAT</td><td>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 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>
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<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>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>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>
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<tr><td>SUBJECTS OFFERED</td><td>Mathematics (Compulsory)
Additional Math (SOE Option)
Computing (SOE Option)</td><td>Mathematics (Compulsory)
Additional Math* (By Offer)
*A Math is NOT offered in Sec 5</td><td>Mathematics (Compulsory)</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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<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
45 minutes</td><td>There will be 13–15 questions of varying marks and lengths.

Candidates are required to answer ALL questions.</td><td>70</td><td>50%</td></tr>
<tr><td>Paper 2</td><td>1 hour
45 minutes</td><td>There will be 8–10 questions of varying marks and lengths.

Candidates are required to answer ALL questions.</td><td>70</td><td>50%</td></tr>
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Additional Math
Computing</td><td>Mathematics (Compulsory)
Additional Math (By Offer)</td><td>Mathematics (Compulsory)</td></tr>
<tr><td>ASSESSMENT FORMAT</td><td>Computing:
<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>70%</td><td>80</td><td>A mixture of
• Short answer questions
• Matching questions
• Cloze passage
• Structured questions</td><td>All the four modules</td></tr>
<tr><td>2</td><td>Lab-based</td><td>2 h 30 min</td><td>30%</td><td>50</td><td>4 compulsory structured questions
• Use of Spreadsheet functions and features
• Refinement of program
• Debugging of program
• Development of program with no more than 40 lines of code

Development of program will carry 20 marks. The remaining three questions average 10 marks.

A quick reference for Python will be provided for candidates.</td><td>Unit 1.1 Data Management from module 1

Module 4: Programming</td></tr>
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	Additional Math	Computing
CRITERIA, DESIRED DISPOSITIONS	**Criteria:** **Express** : A good Pass in Sec 2 Math **Normal(A):** Top 15% in cohort for Math Disposition: For Student who have the interest and ability, to learn more mathematics so that they can pursue mathematics or mathematics-related courses of study in the next stage of education	**Criteria:** **Express:** • Displayed interests & enthusiasm in programming • Good Pass in Sec 2 Mathematics & EL • Based on academic merit and available vacancies
SKILLS & COMPETENCIES TO BE DEVELOPED	Students to be able to • develop critical thinking, reasoning, communication, application and metacognitive skills through a mathematical approach to problem solving • connect ideas within mathematics and between mathematics and other subjects through applications of mathematics • build confidence and foster interest in mathematics.	Students to be able to • 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.

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	Additional Math	Computing
POST-SECONDARY OPPORTUNITIES	• Gives student a better foundation to offer H2 Math at JC • Provides a good head start for students who are passionate about STEM & STEM related courses in Poly	• Gives students a good foundation for Computing/IT related courses in JC or Poly • Providing a good head start for students interested in pursuing a career in data analytics/Fintech