



NSW Education Standards Authority

**2022** HIGHER SCHOOL CERTIFICATE EXAMINATION

# Mathematics Extension 1

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**General****Instructions**

- \* Reading time -- 7 minutes
- \* Working time -- 80 minutes
- \* Write using green pen
- \* Calculators approved by NESA may be used
- \* A reference sheet is provided at the back of this paper
- \* For questions in Section II, show relevant mathematical reasoning and/or calculations
- \* Write your Centre Number and Student Number on all Writing Booklets attached

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**Total marks:**  
**47****Section I -- 7 marks**

- \* Attempt Questions 1-7
- \* Allow about 7 minutes for this section

**Section II -- 40 marks**

- \* Attempt Questions 8-10
- \* Allow about 73 minutes for this section

## Section I

**7 marks**

**Attempt Questions 1--7**

**Allow about 7 minutes for this section**

Use the multiple-choice answer sheet for Questions 1--7.

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1. Given that  $\frac{1}{x} = 1$   
and  $\frac{1}{y} = 1$   
, evaluate  $\frac{1}{x+y}$ .