



# Cambridge International AS & A Level

CANDIDATE NAME



CENTRE NUMBER

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CANDIDATE NUMBER

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**MATHEMATICS**

**9709/22**

Paper 2 Pure Mathematics 2

**October/November 2025**

**1 hour 15 minutes**

You must answer on the question paper.

You will need: List of formulae (MF19)

## INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- If additional space is needed, you should use the lined page at the end of this booklet; the question number or numbers must be clearly shown.
- You should use a calculator where appropriate.
- You must show all necessary working clearly; no marks will be given for unsupported answers from a calculator.
- Give non-exact numerical answers correct to 3 significant figures, or 1 decimal place for angles in degrees, unless a different level of accuracy is specified in the question.

## INFORMATION

- The total mark for this paper is 50.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **12** pages. Any blank pages are indicated.









3 (a) Solve the inequality  $|3x - 4| \leq |2x + 5|$ . [4]

Dotted lines for writing the solution to part (a).

(b) Hence find the largest integer  $N$  satisfying the inequality  $|3 \times 7^{0.01N} - 4| \leq |2 \times 7^{0.01N} + 5|$ . [3]

Dotted lines for writing the solution to part (b).

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