

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS SPECIFICATION A/B/C**

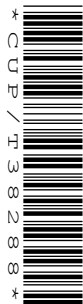
**J512/06
B254
B266**

OPTION B (OCR MARKED TASKS)

FOUNDATION TASK A

TO BE COMPLETED BY 19 APRIL 2008

Additional materials: Answer booklet
Electronic calculator
Geometrical instruments



INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the spaces provided on the answer booklet and in the spaces on any graph or squared paper used.

Write your answers on the answer booklet and any graph or squared paper provided.

If appropriate you may fasten notes and computer printout securely to the answer booklet, graph and squared paper with the answer booklet, graph and squared paper on top of any such attached materials.

INFORMATION FOR CANDIDATES

You may use an electronic calculator.

ADVICE TO CANDIDATES

To gain the highest mark possible, you should attempt to include as many of the following features as possible.

Plan the task

- Use a clear method.
- Break the task into stages.
- Write down questions which, as you answer them, help you find out more about the work.
- Explore as many aspects of the task as possible, explaining why and how you do this.

Explain your work

- Develop the task into new situations and explore these thoroughly.
- Use words, suitable tables, diagrams, graphs, calculations, etc.
- Link as much of your work together as possible, explaining why you chose the tables and charts you used and rejected others.
- Use algebra or symbols to give efficient and clear explanations.
- Present results and conclusions in the clearest way possible.

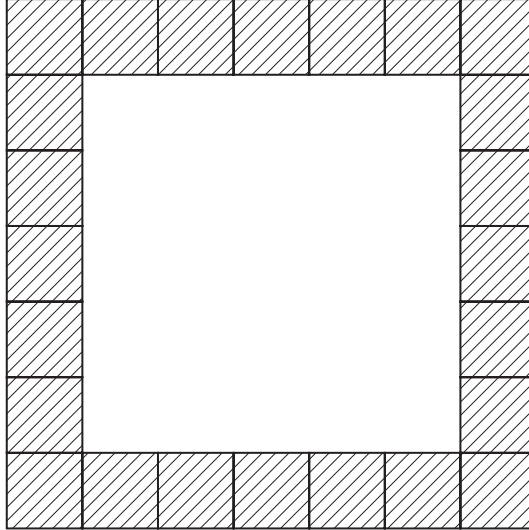
State your findings

- Show how patterns have been used and test conclusions.
- State general results in words and explain what these mean.
- Write formulae where appropriate and explain how they have been found from the situations you have explored.
- Prove or justify the results using efficient mathematical methods.
- Develop new results from work previously done and use clear reasoning to prove or justify conclusions. Make sure your reasoning is accurate and draws upon the evidence you have presented.

This document consists of **2** printed pages and **2** pages of blank grids.

OCR Marked Task AO1
Suitable for Foundation Tier
(May be used for Higher Tier)

Mirrors



Sasha uses tiles to make borders for square mirrors. The picture shows a design for a 5 by 5 mirror with a border of 1 by 1 tiles.

- 1 What is the total number of 1 by 1 tiles used to make a border for
 - (i) a 5 by 5 mirror,
 - (ii) a 7 by 7 mirror?
- 2 Investigate the total number of 1 by 1 tiles that are needed to make borders for different sized square mirrors.
- 3 Extend your investigation to other mirrors with borders, making clear the rules and methods that you use.



Centre Number

Candidate Number

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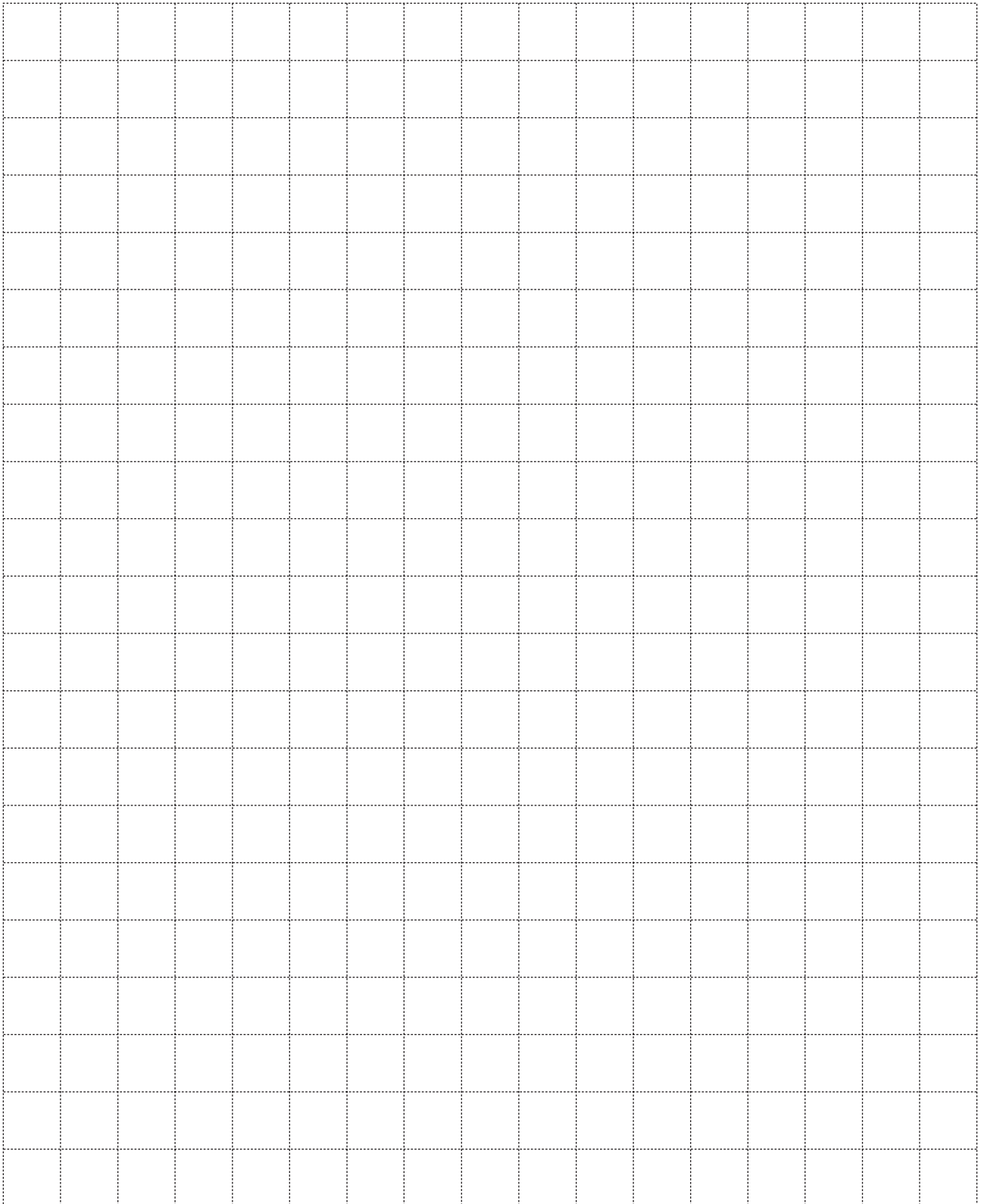
Detach this sheet.

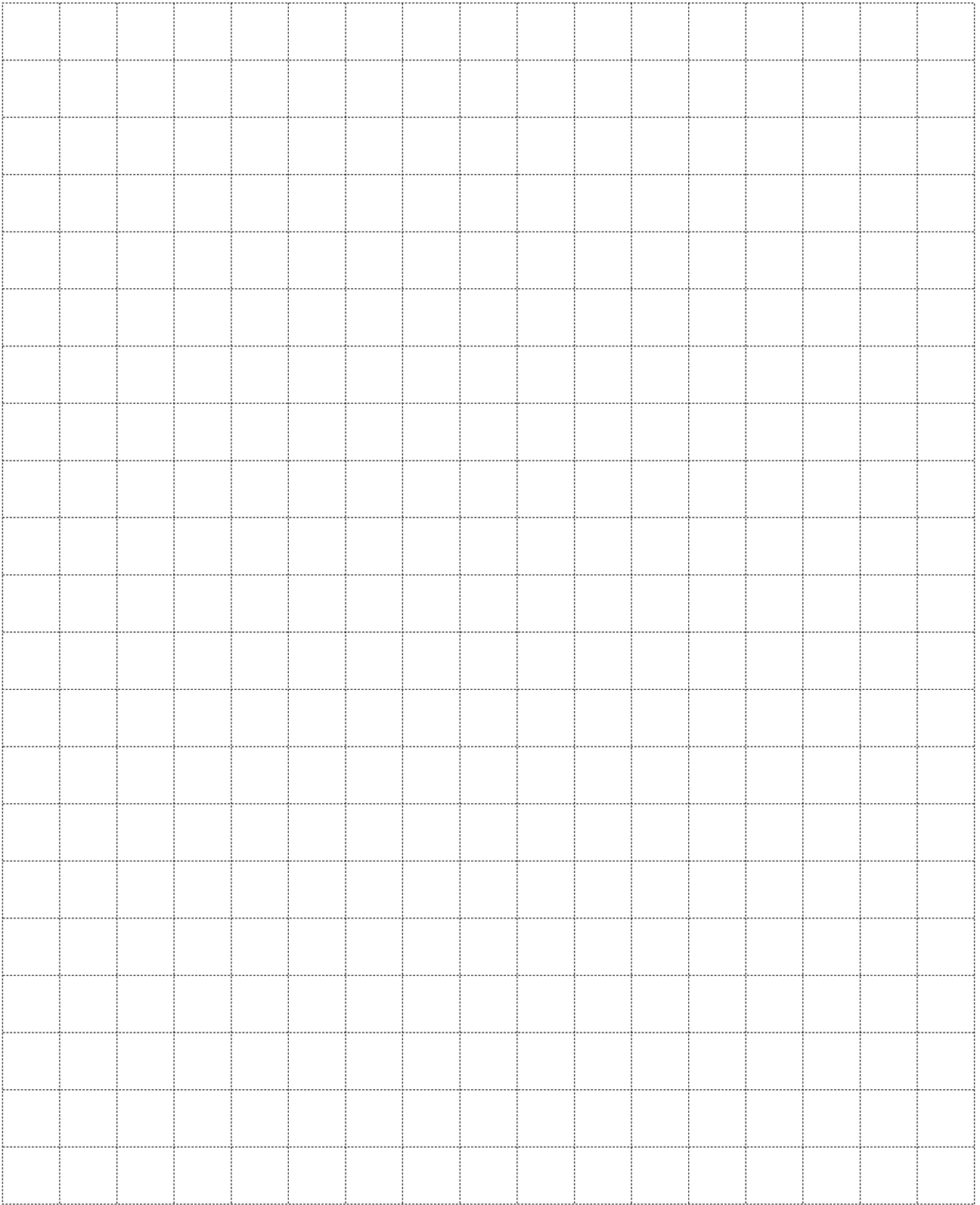
Candidate Name

Read the Instructions on the front page of your question paper. Use both sides of this sheet.

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J512/06/B254/B266 OPTION B





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