

Name

Class



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Plans and elevations

(9 – 1) Topic booklet

HIGHER

These questions have been collated from previous years GCSE Mathematics papers.

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must **show all your working out.**
- If the question is a **1F** question you are not allowed to use a calculator.
- If the question is a **2F** or a **3F** question, you may use a calculator to help you answer.

Information

- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

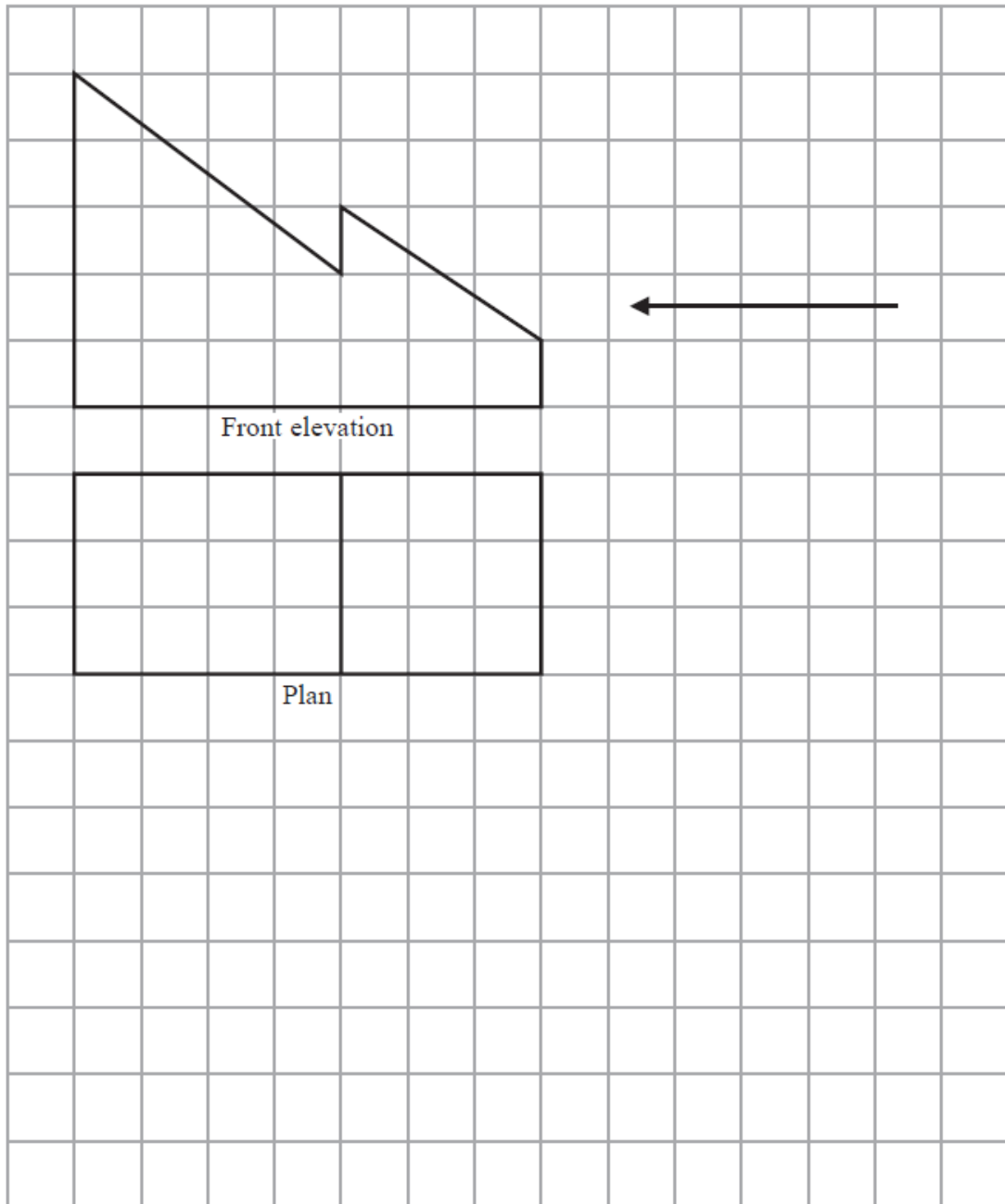
Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

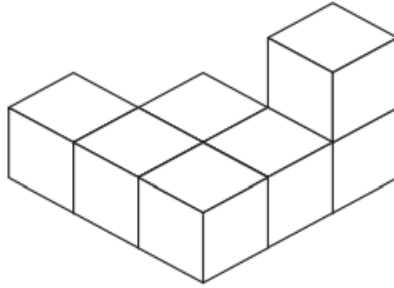
Answer ALL questions
Write your answers in the space provided.
You must write down all the stages in your working.

2 The front elevation and the plan of a solid are shown on the grid.

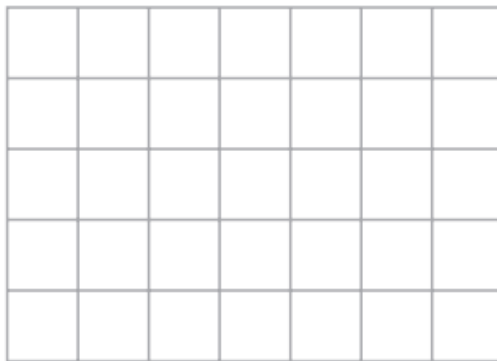
On the grid, draw the side elevation of the solid from the direction of the arrow.



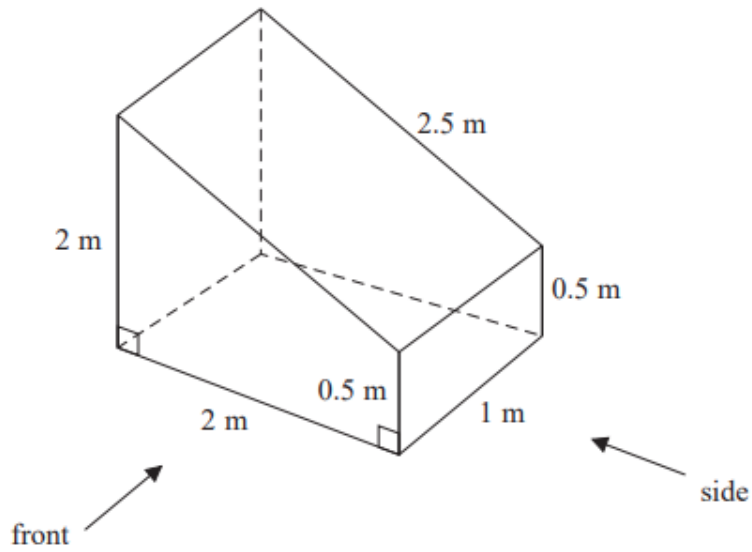
2 The diagram represents a solid made from seven centimetre cubes.



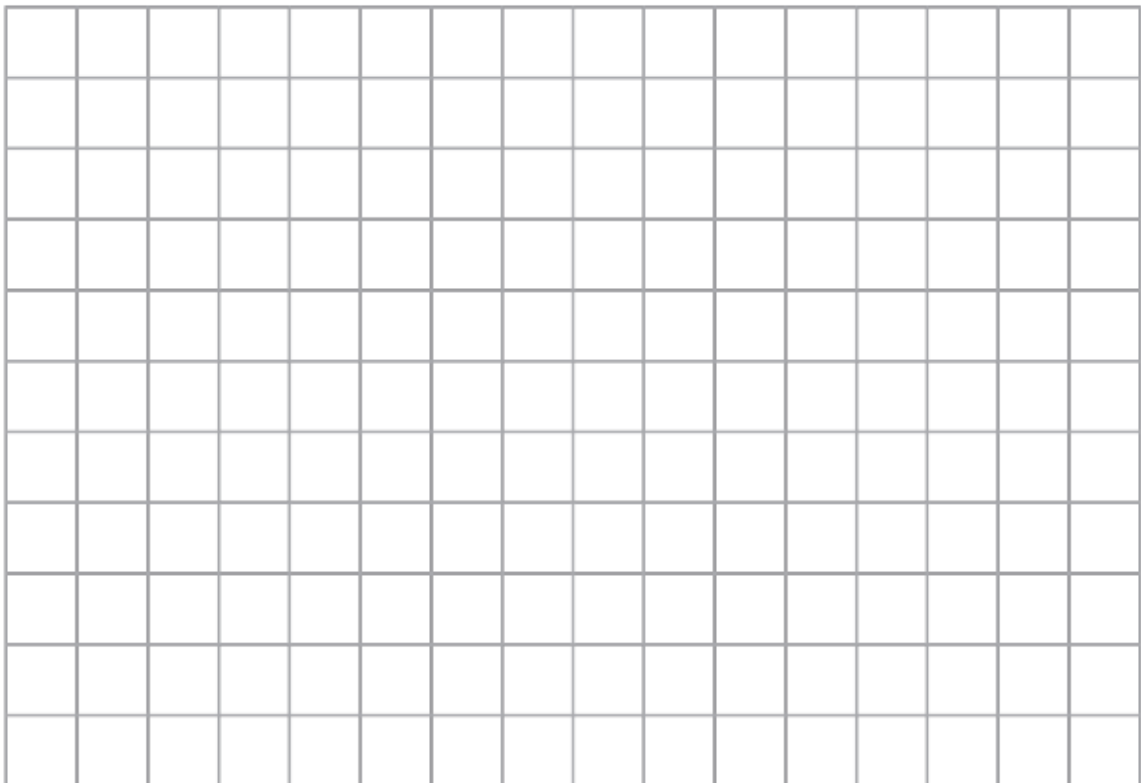
On the centimetre grid below, draw a plan of the solid.



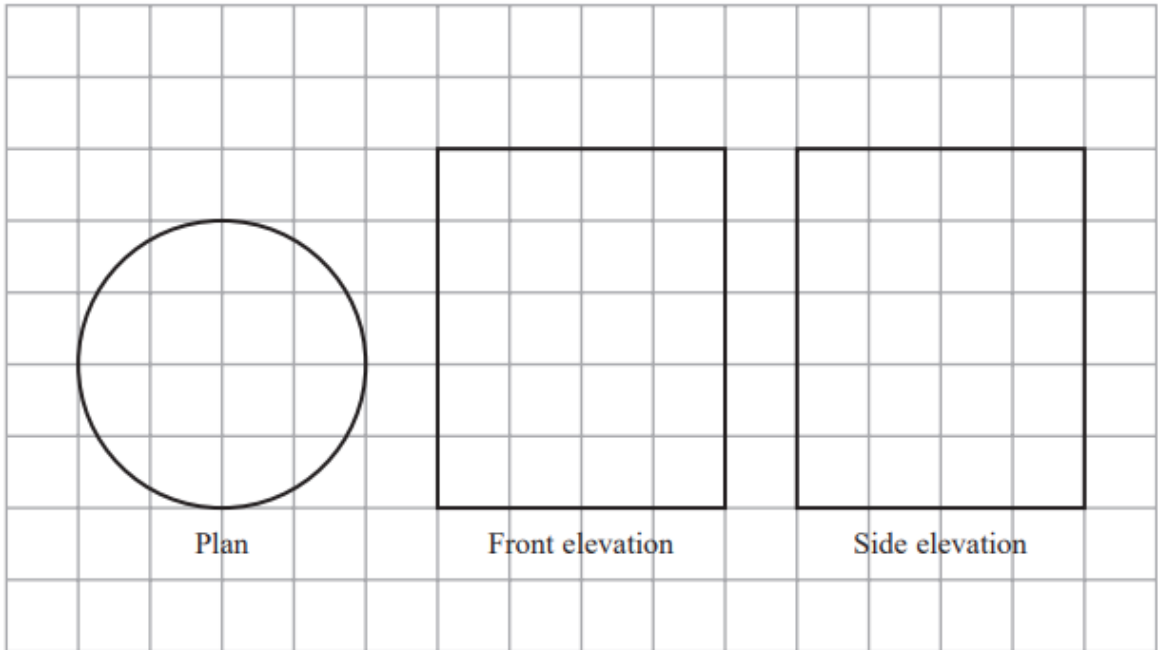
3 The diagram shows a prism with a cross section in the shape of a trapezium.



On the centimetre grid below, draw the front elevation and the side elevation of the prism. Use a scale of 2 cm to 1 m.

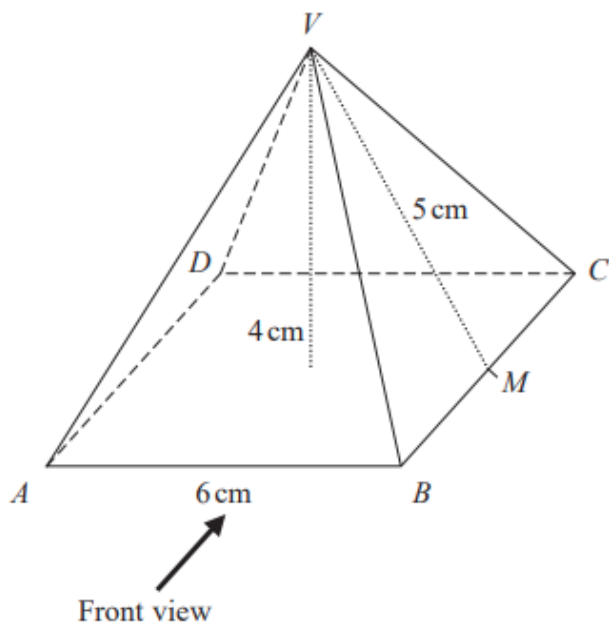


- 4 The diagram shows the plan, front elevation and side elevation of a solid shape, drawn on a centimetre grid.



In the space below, draw a sketch of the solid shape.
Give the dimensions of the solid on your sketch.

5 Here is a solid square-based pyramid, $VABCD$.



The base of the pyramid is a square of side 6 cm .

The height of the pyramid is 4 cm .

M is the midpoint of BC and $VM = 5\text{ cm}$.

(a) Draw an accurate front elevation of the pyramid from the direction of the arrow.



(2)

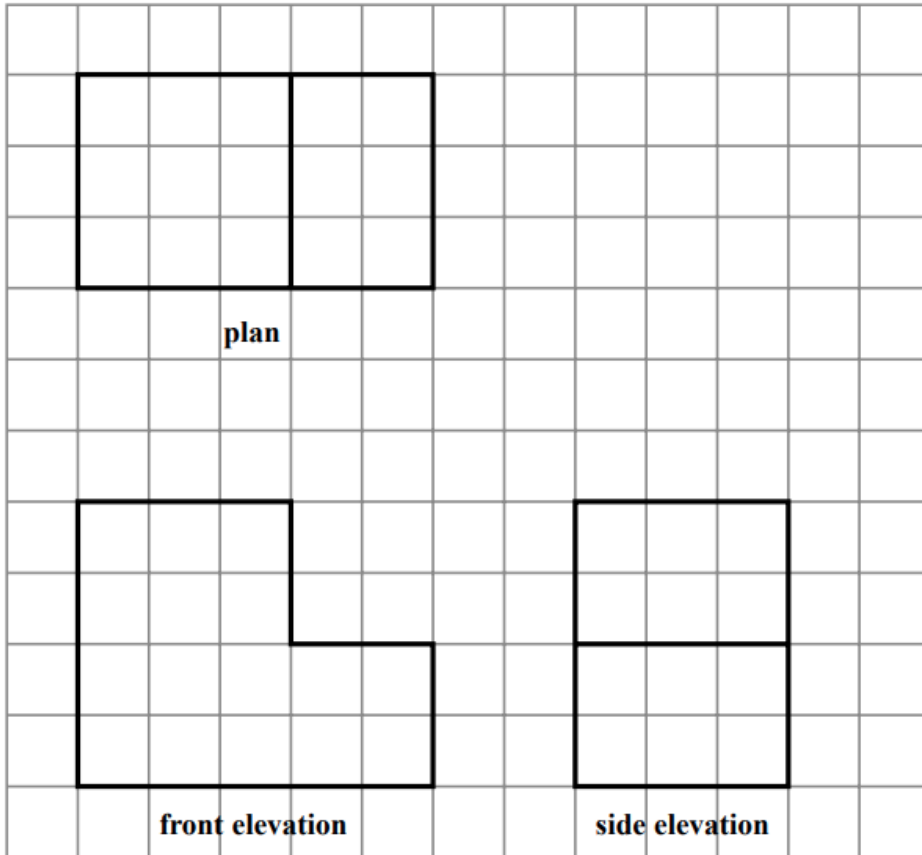
(b) Work out the total surface area of the pyramid.

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(4)

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(Total for Question 5 is 6 marks)

- 6 The plan, front elevation and side elevation of a solid prism are drawn on a centimetre grid.



In the space below, draw a sketch of the solid prism.
Write the dimensions of the prism on your sketch.