Name	Class

♦ MATHS TEACHER HUB

www.MathsTeacherHub.com

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 **1H** question you are not allowed to use a calculator.
•If the question is a **2H** or a **3H** 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.

Front elevation
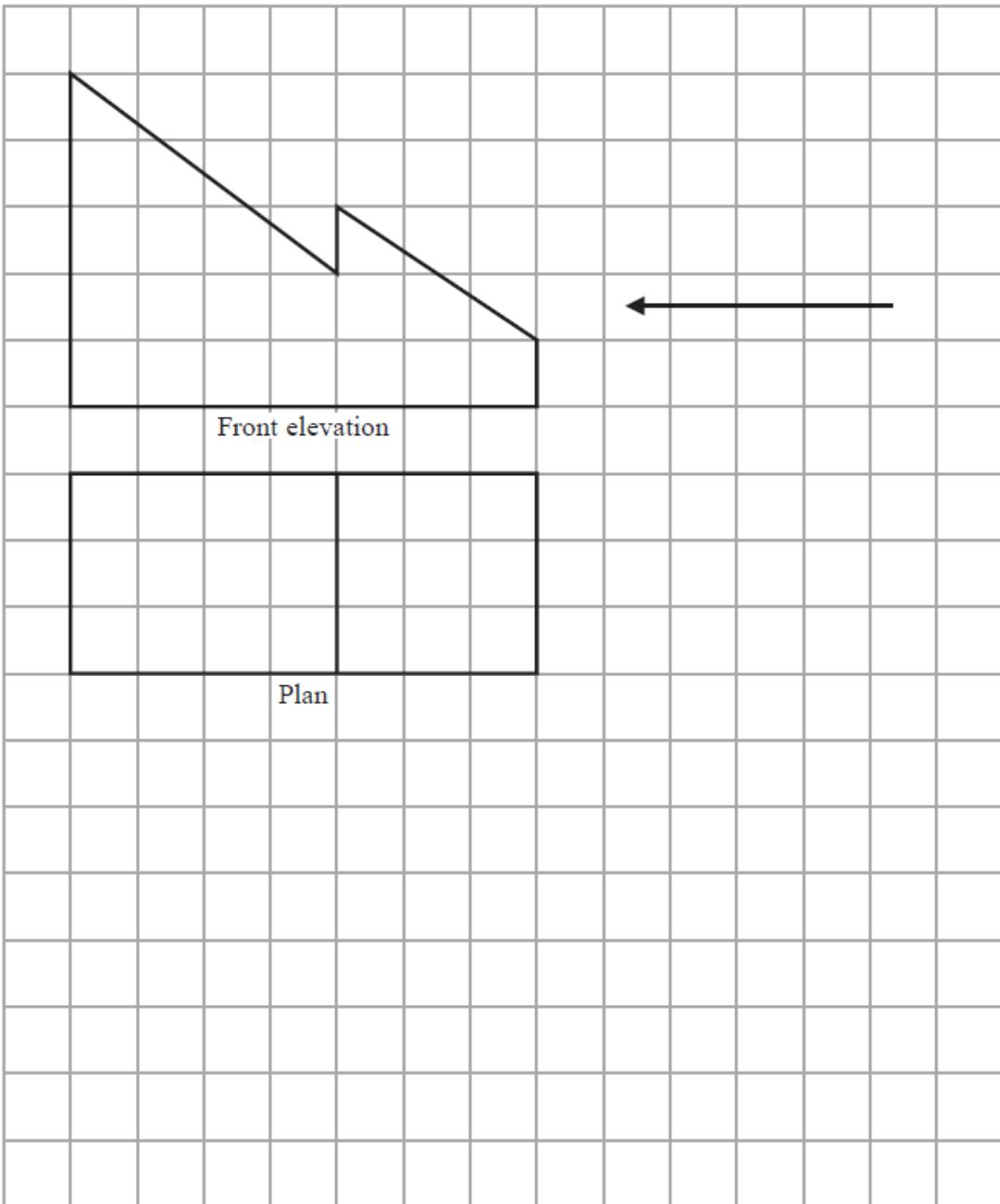
Plan

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

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

(Total for Question 2 is 2 marks)
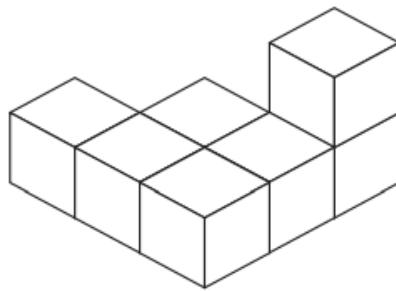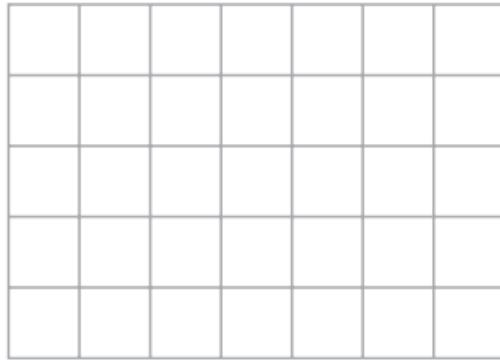
3 The diagram shows a solid triangular prism.
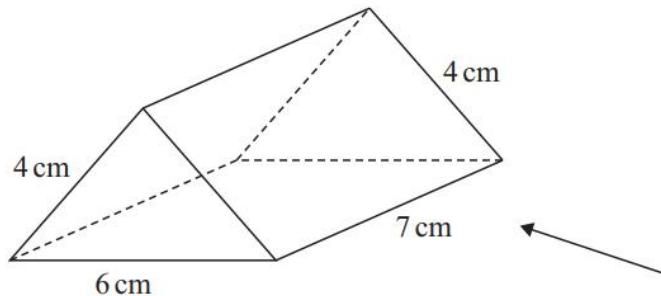
Rana is trying to draw the side elevation of the solid prism from the direction of the arrow.

Here is her answer on a centimetre grid.
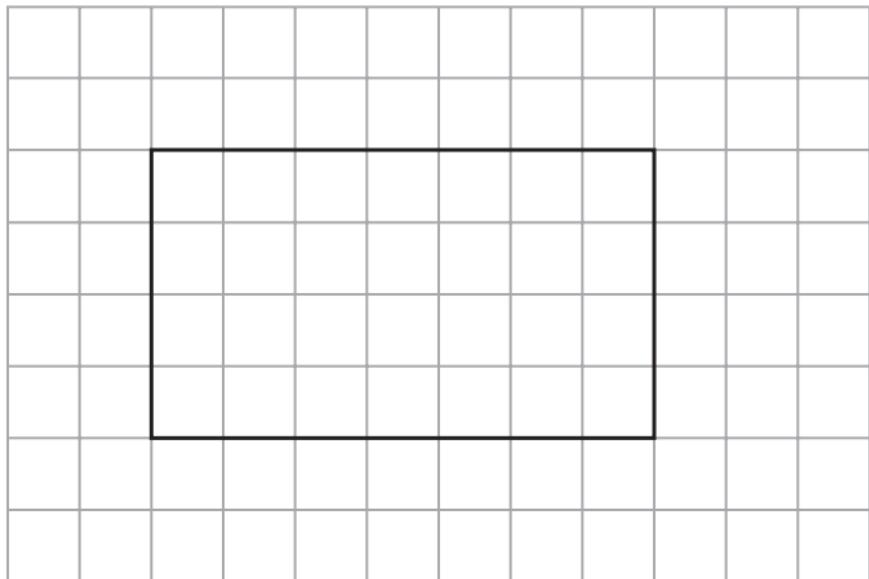
(a) Explain why Rana's side elevation is not correct.

...

....

....

(1)

(b) On the centimetre grid below, draw a plan of the solid prism.

(2)

(Total for Question 3 is 3 marks)
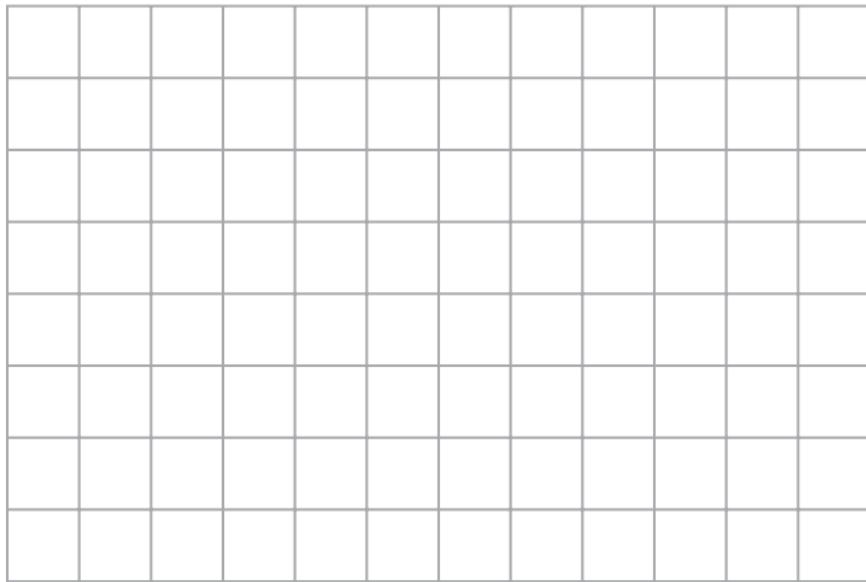
3 The diagram shows a prism with a cross section in the shape of a trapezium.
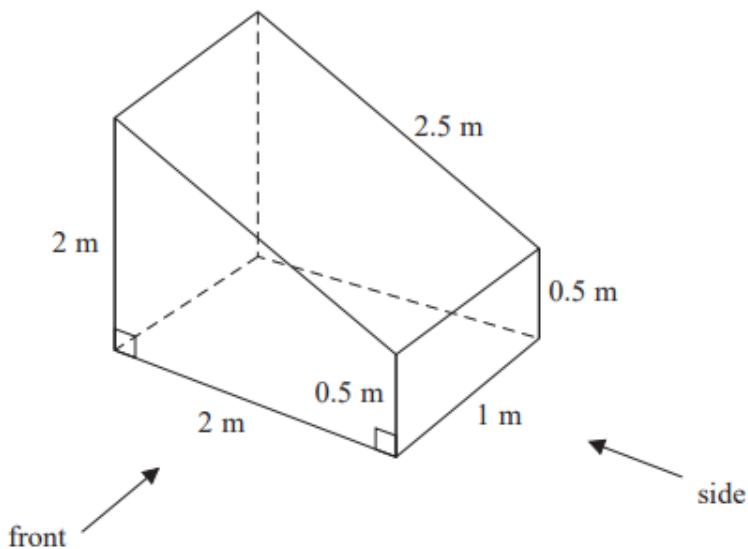
On the centimetre grid below, draw the front elevation and the side elevation of the prism.
Use a scale of 2 cm to 1 m.

(Total for Question 3 is 4 marks)
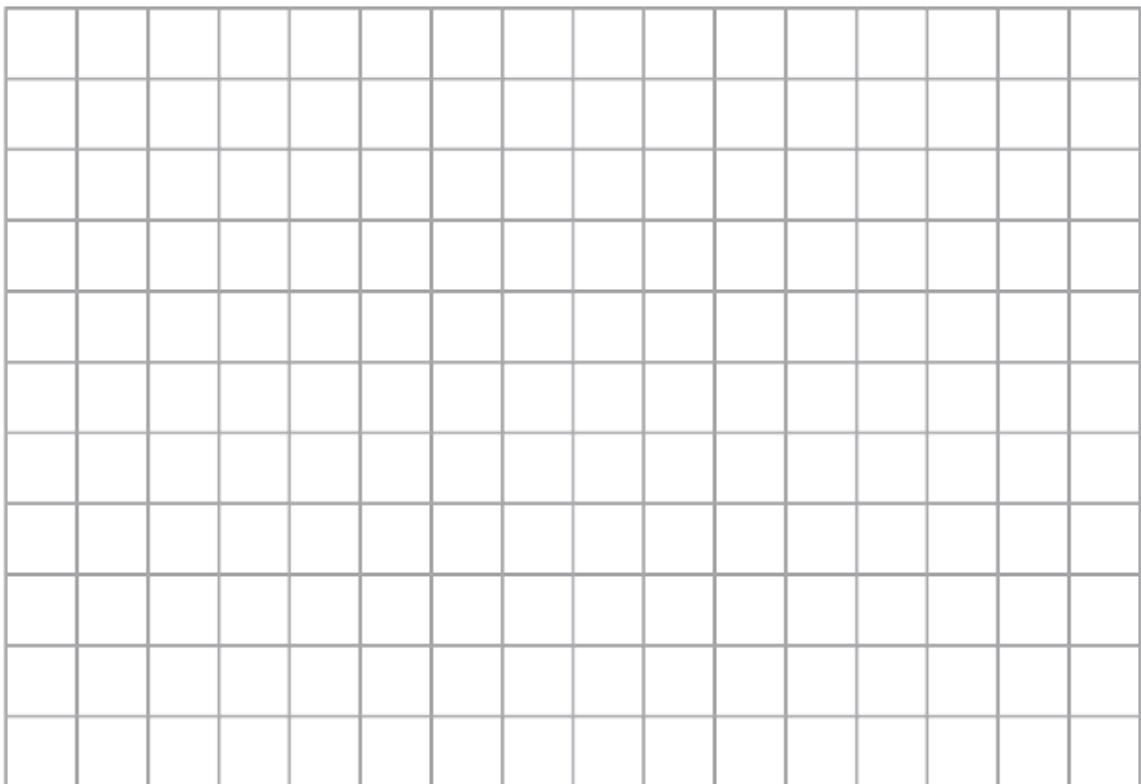
4   The diagram shows the plan, front elevation and side elevation of a solid shape, drawn on a centimetre grid.

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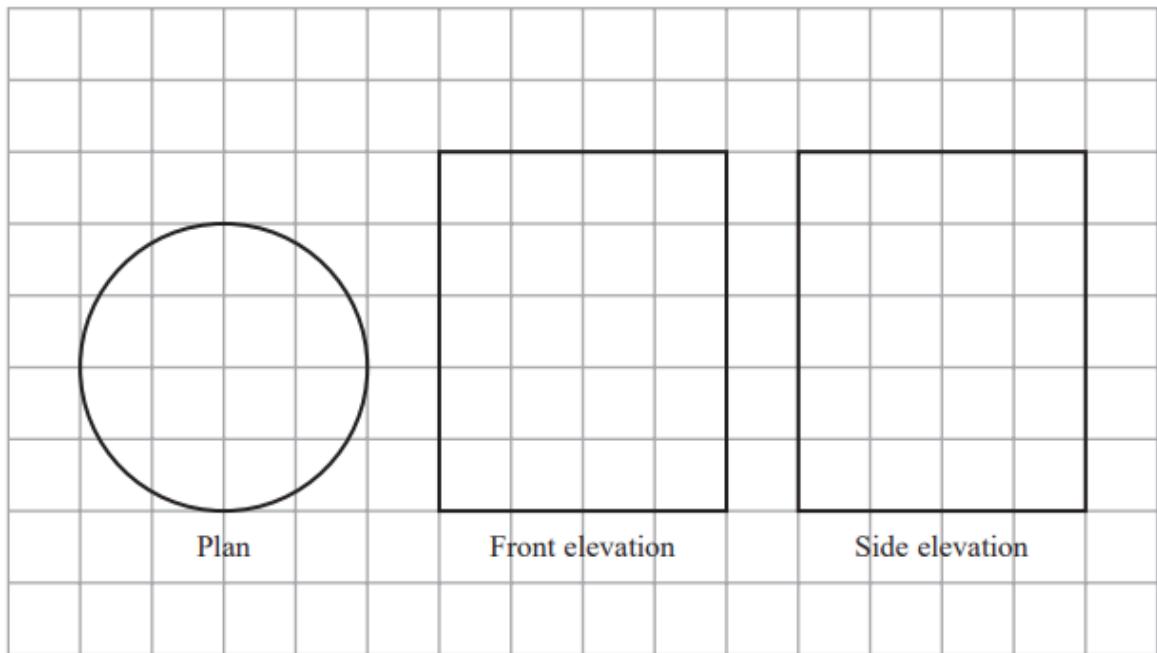
In the space below, draw a sketch of the solid shape.
Give the dimensions of the solid on your sketch.

5 Here is a solid square-based pyramid, *VABCD*.
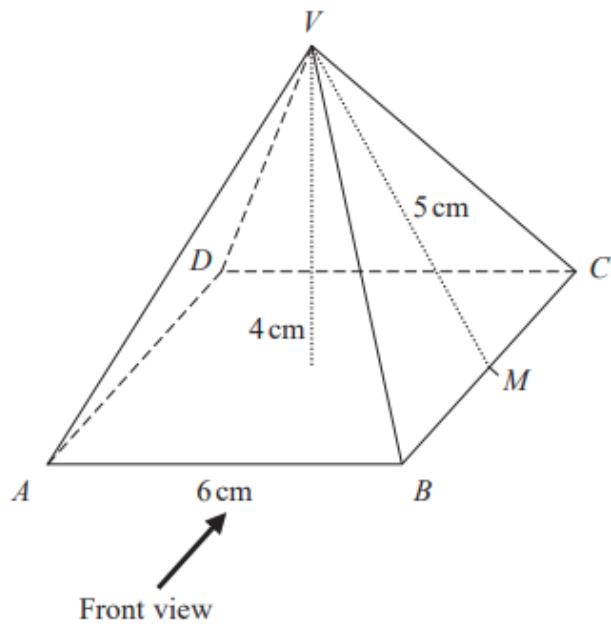
The base of the pyramid is a square of side 6 cm.
The height of the pyramid is 4 cm.
M is the midpoint of *BC* and *VM* = 5 cm.

(a) Draw an accurate front elevation of the pyramid from the direction of the arrow.
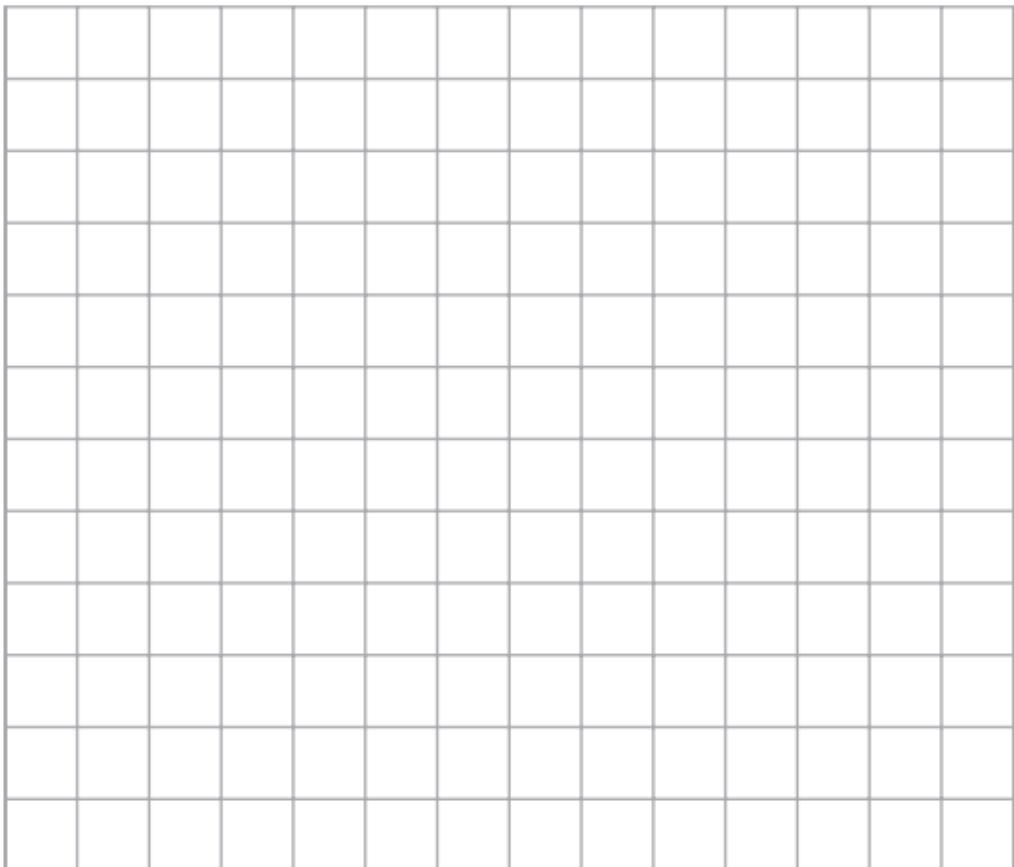
(2)

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

....

(4)

June 2018 – Paper 1H

(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.

plan

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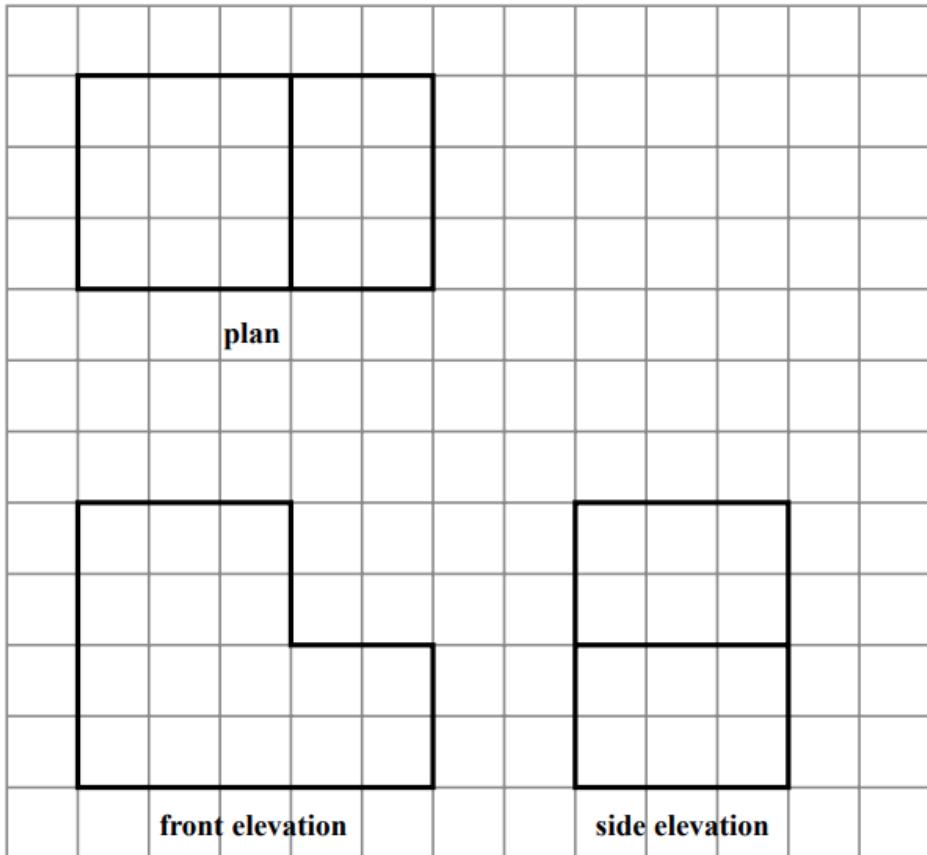
In the space below, draw a sketch of the solid prism.
Write the dimensions of the prism on your sketch.

(Total for Question 6 is 2 marks)