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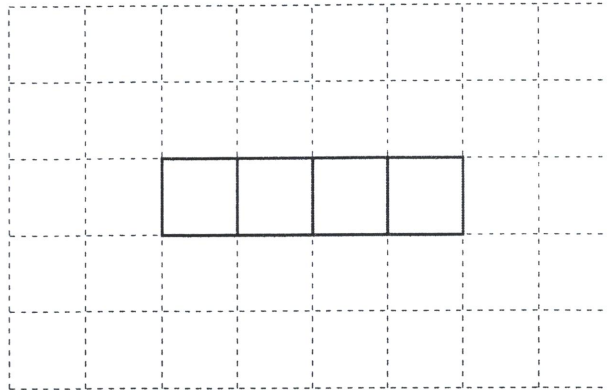
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MATHEMATICS -CORE

TOPIC- Nets of solids

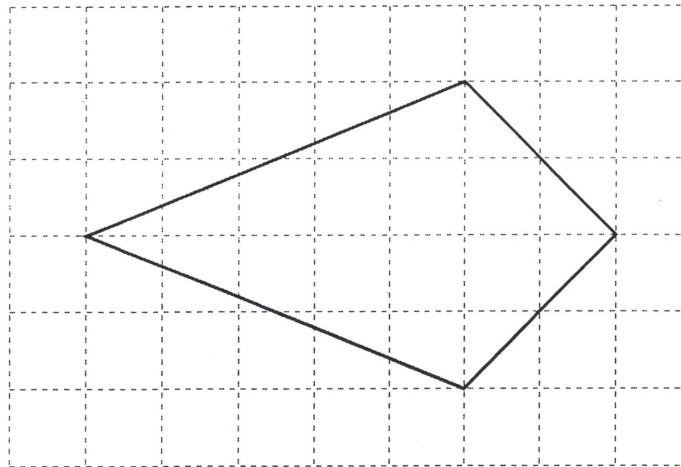
01 Four faces of a cube are drawn on the grid.

Complete the net of this cube.



[1]

02



The diagram shows a quadrilateral drawn on a 1 cm square grid.

(a) Write down the mathematical name of the quadrilateral.

Answer(a) [1]

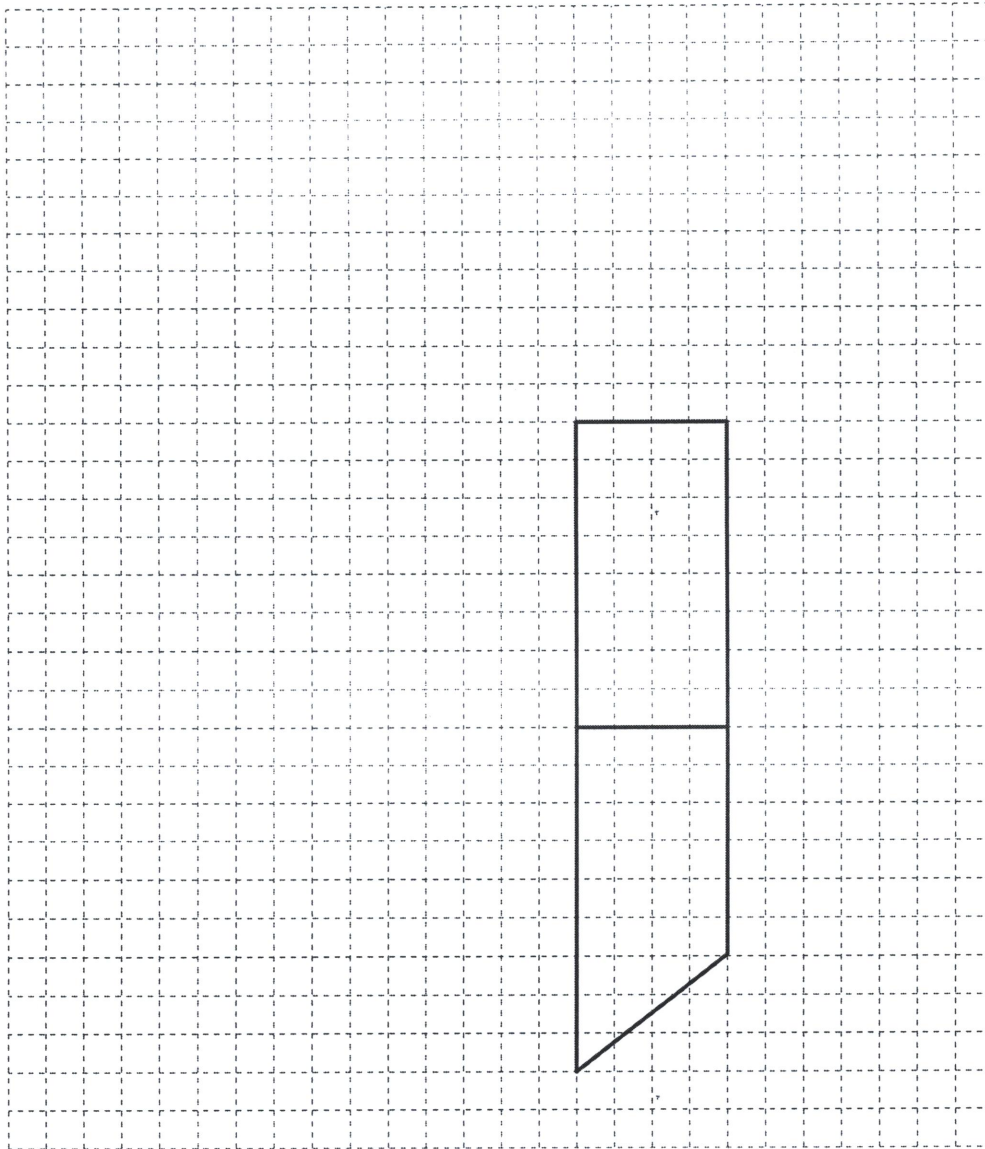
(b) Find the area of the quadrilateral and give the units.

Answer(b) [2]

03

On the grid, complete the net of the box.
The base and one face of the box have been drawn for you.

The scale is 2 cm to 1 m.



[4]



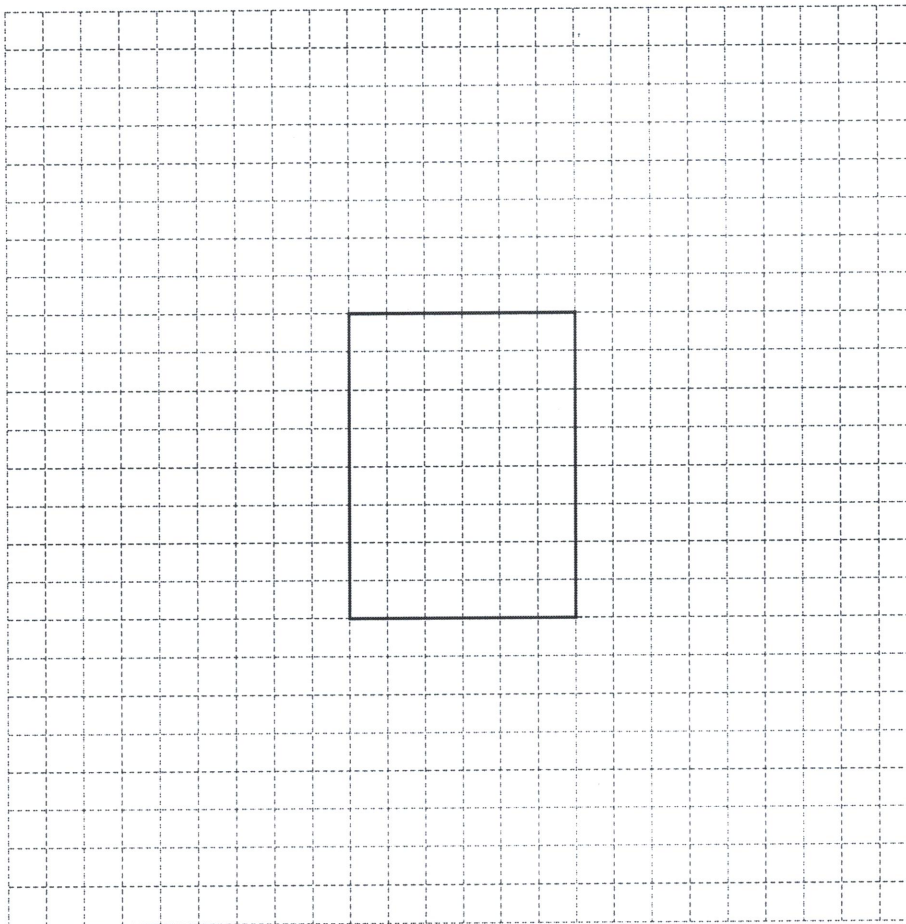
04

(a) A cuboid has length 4 cm, width 3 cm and height 1.5 cm.

(i) Calculate the volume of the cuboid.

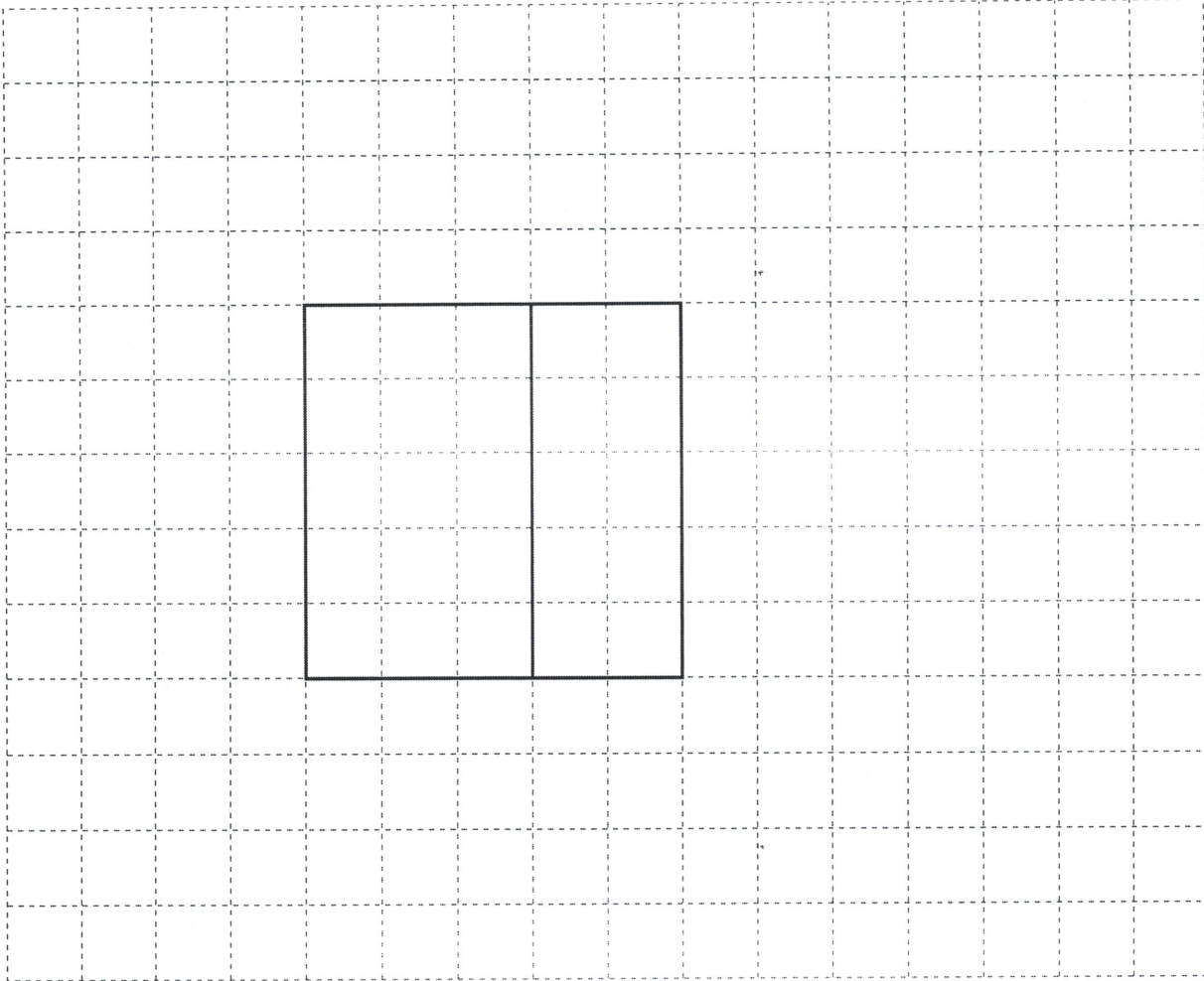
..... cm³ [2]

(ii) On the grid, draw an accurate net of the cuboid.
One face has been drawn for you.



[3]





The diagram shows part of the net of a cuboid.
It is drawn full size.

- (a) Complete the net of the cuboid. [2]
- (b) Work out the volume of the cuboid.
Write down the units of your answer.

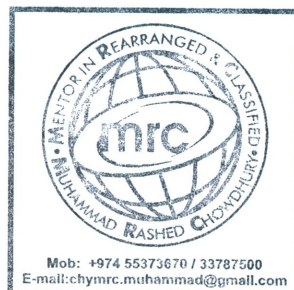
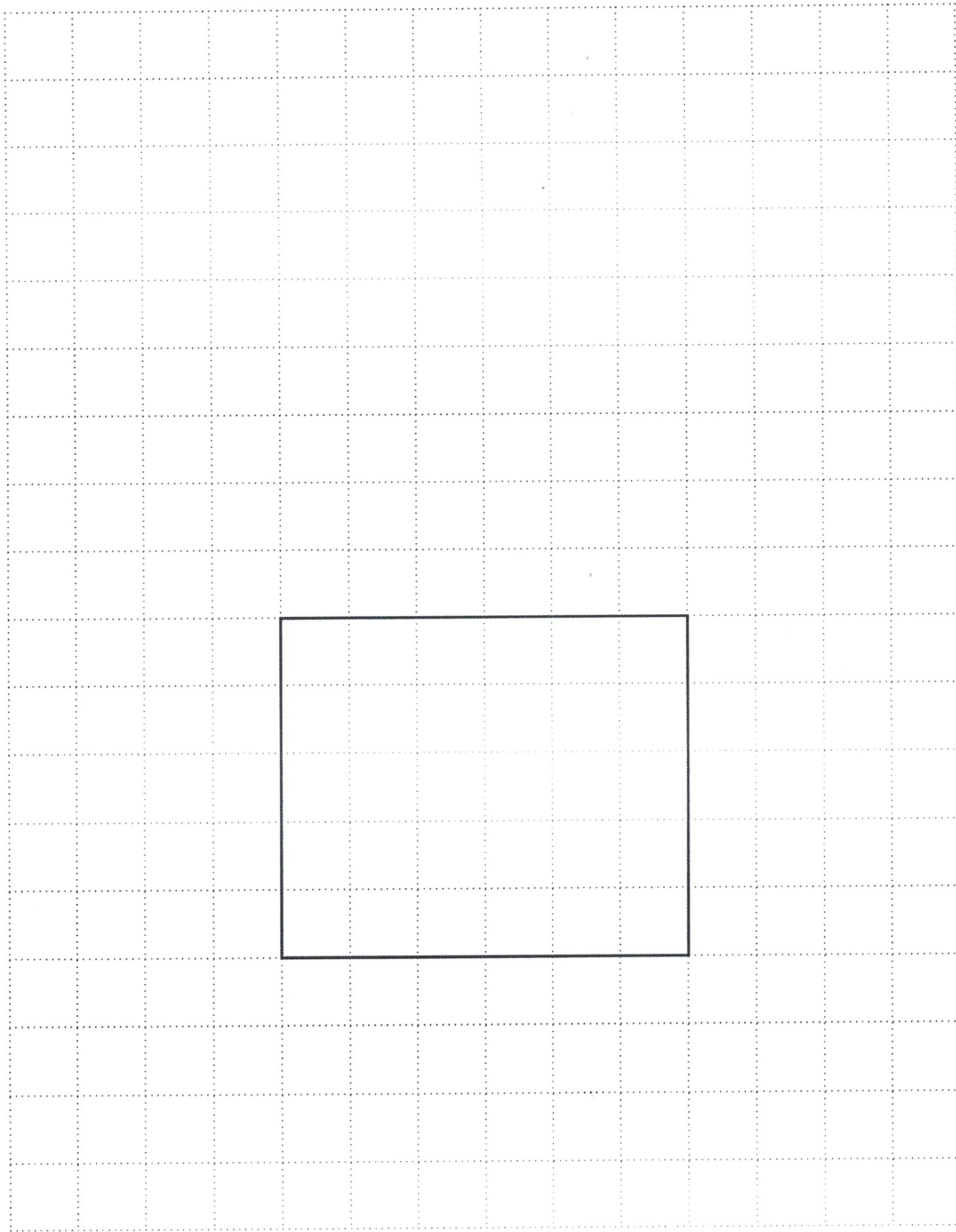
Answer(b) [3]



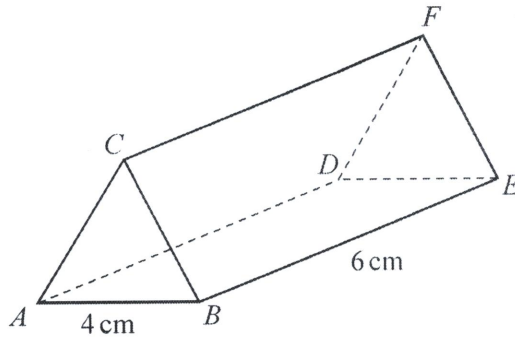
06 A cuboid has length 6 cm, width 5 cm and height 3 cm.

M-11-17

On the 1 cm^2 grid, complete the net of the cuboid.
The base is drawn for you.



[3]



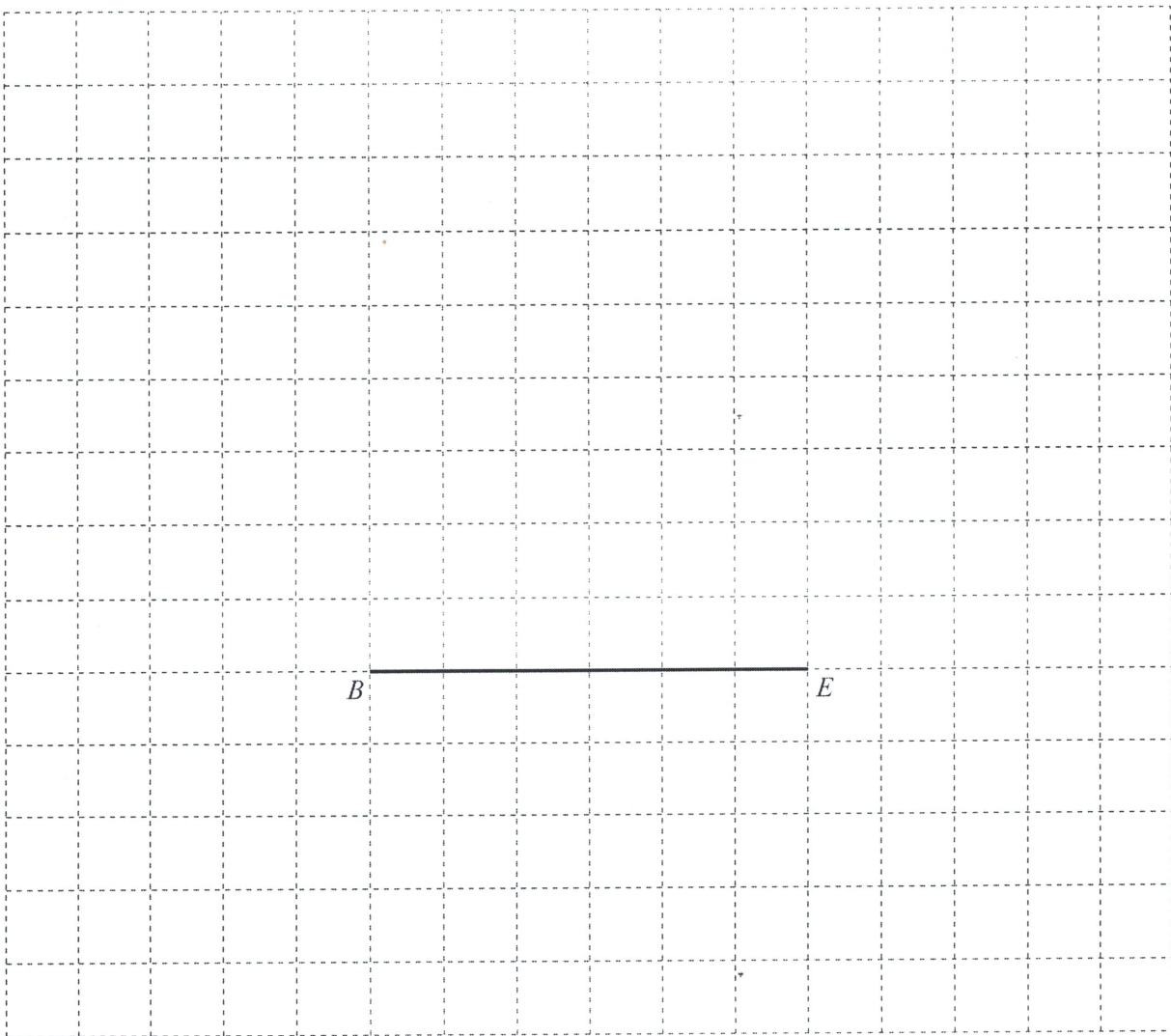
NOT TO
SCALE

The diagram shows a triangular prism.
Triangle ABC is equilateral.
 $AB = 4\text{ cm}$ and $BE = 6\text{ cm}$.

(a) Write down the size of angle ABC .

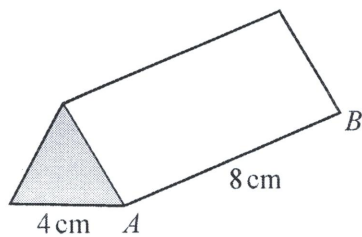
Answer(a) Angle $ABC = \dots\dots\dots$ [1]

(b) On the 1 cm^2 grid, draw an accurate net of the prism.
The line BE has been drawn for you.



[3]

08 (a)



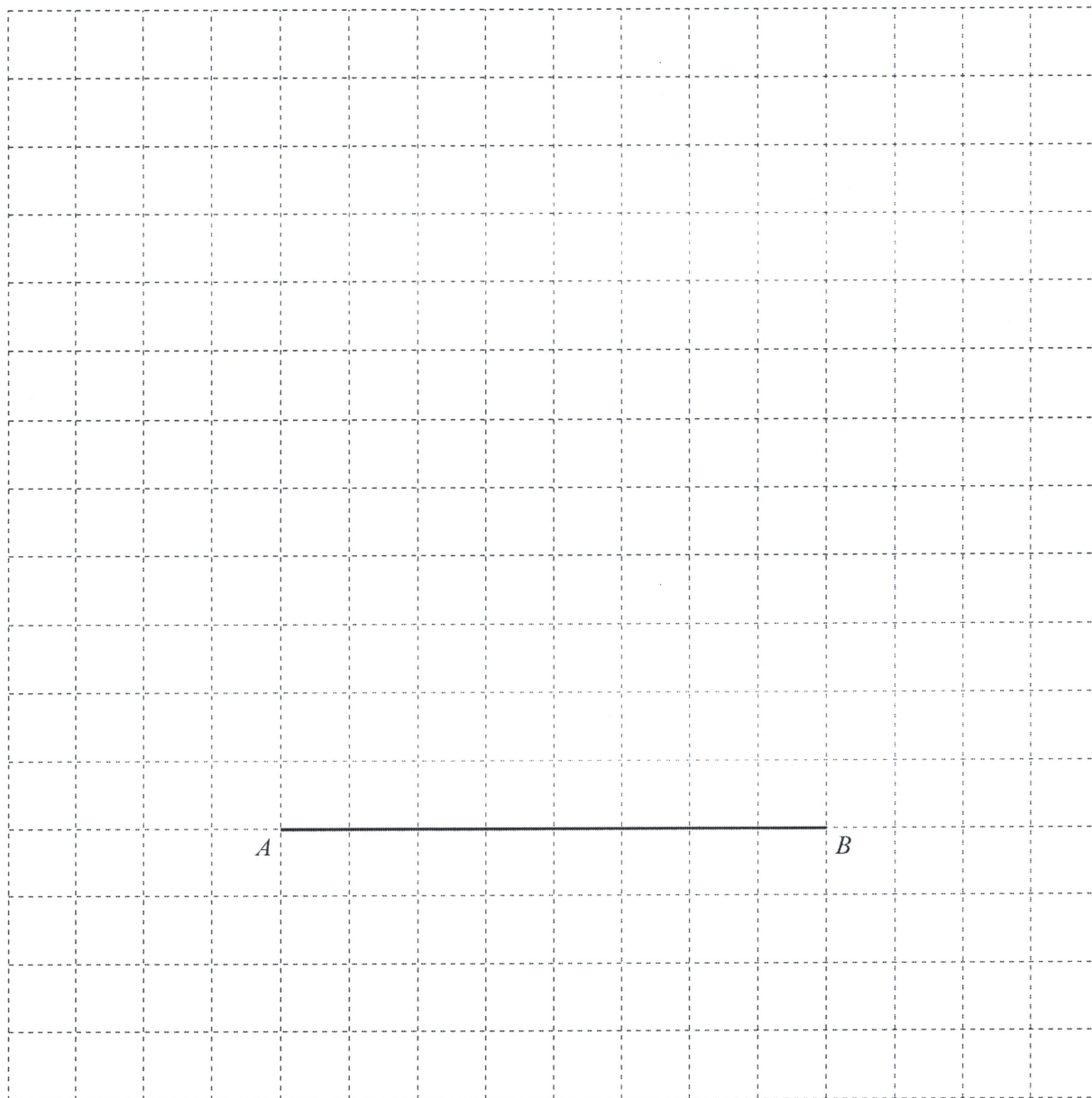
NOT TO SCALE

Sweets are packed in a box.
The cross section of the box is an equilateral triangle with side 4 cm.
The length of the box is 8 cm.

- (i) Write down the mathematical name for the box.

Answer(a)(i) [1]

- (ii) Draw an accurate net for the box.
Side AB has been drawn for you.



[3]

(iii) The surface area of the box is 10986 mm^2 .

Change this surface area to square centimetres.

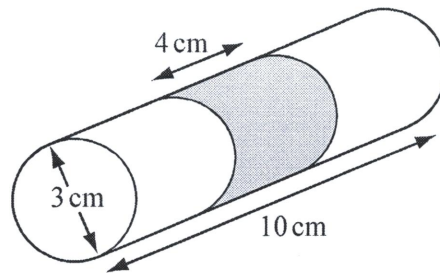
Answer(a)(iii) cm^2 [1]

(iv) The box contains 120 g of sweets, correct to the nearest 10 g.

Write down the lower bound of the mass of sweets in the box.

Answer(a)(iv) g [1]

(b)



NOT TO
SCALE

Another box of sweets is in the shape of a cylinder.
The cylinder has diameter 3 cm and length 10 cm.

(i) Calculate the volume of the cylinder.

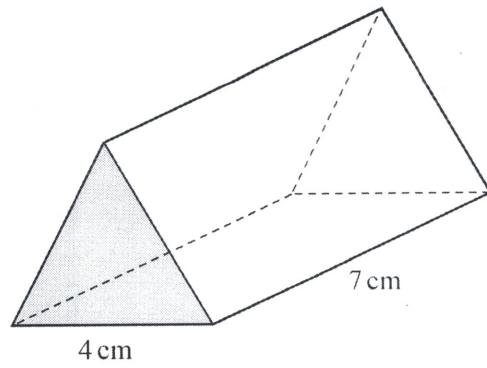
Answer(b)(i) cm^3 [3]

(ii) A label of width 4 cm fits around the cylinder with no overlap.

Calculate the area of the label.

Answer(b)(ii) cm^2 [3]

Question 9 is printed on the next page.

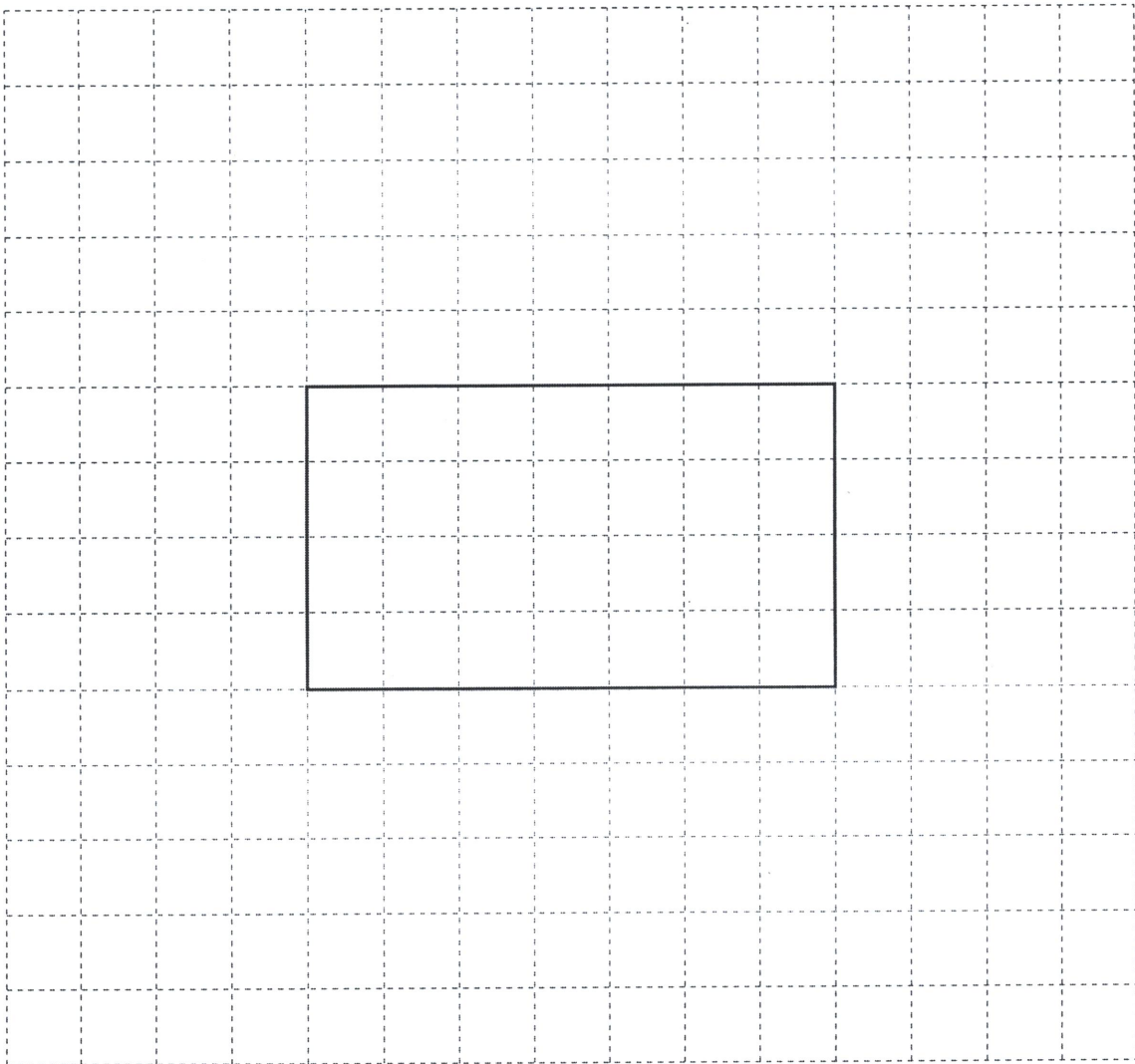


NOT TO
SCALE



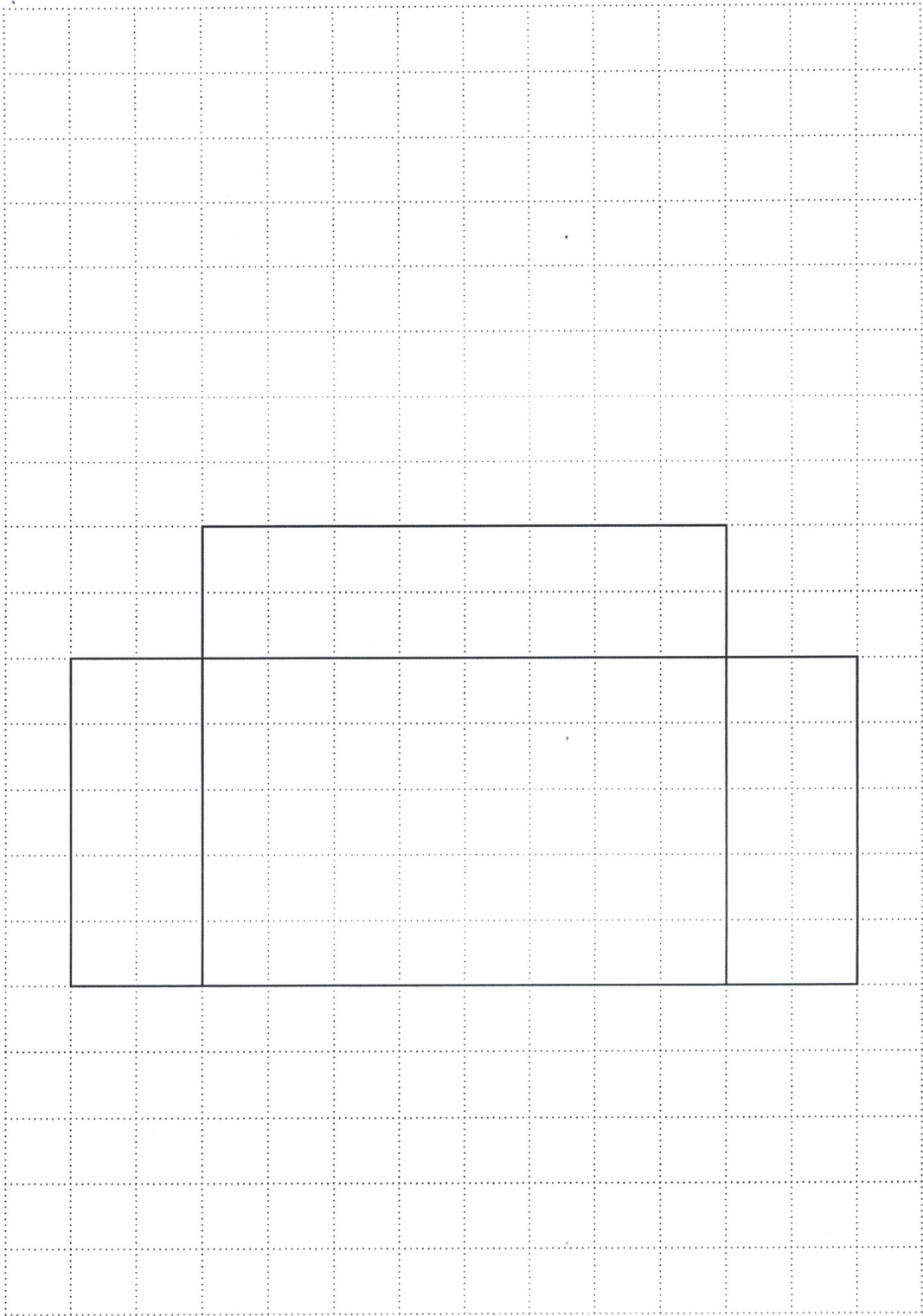
The diagram shows a prism.
The cross section is an equilateral triangle.

On the grid, draw an accurate net of the prism.
The base is drawn for you.



[3]

10 (a)



The diagram shows part of a net for a cuboid drawn on a 1 cm^2 grid.

- (i) Complete the diagram for the net of the cuboid.

[1]

(ii) Calculate the surface area of the cuboid.

Answer(a)(ii)..... cm² [2]

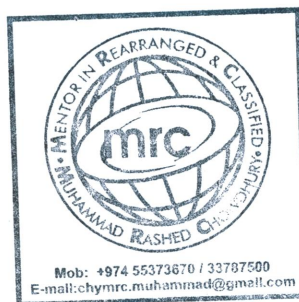
(iii) Calculate the volume of the cuboid.
Give the units of your answer.

Answer(a)(iii)..... [3]

(b) A different cuboid has volume 60 cm³.
Its sides are all integer lengths.
All of its sides have length greater than 1 cm.
The length of one of its sides is a square number.

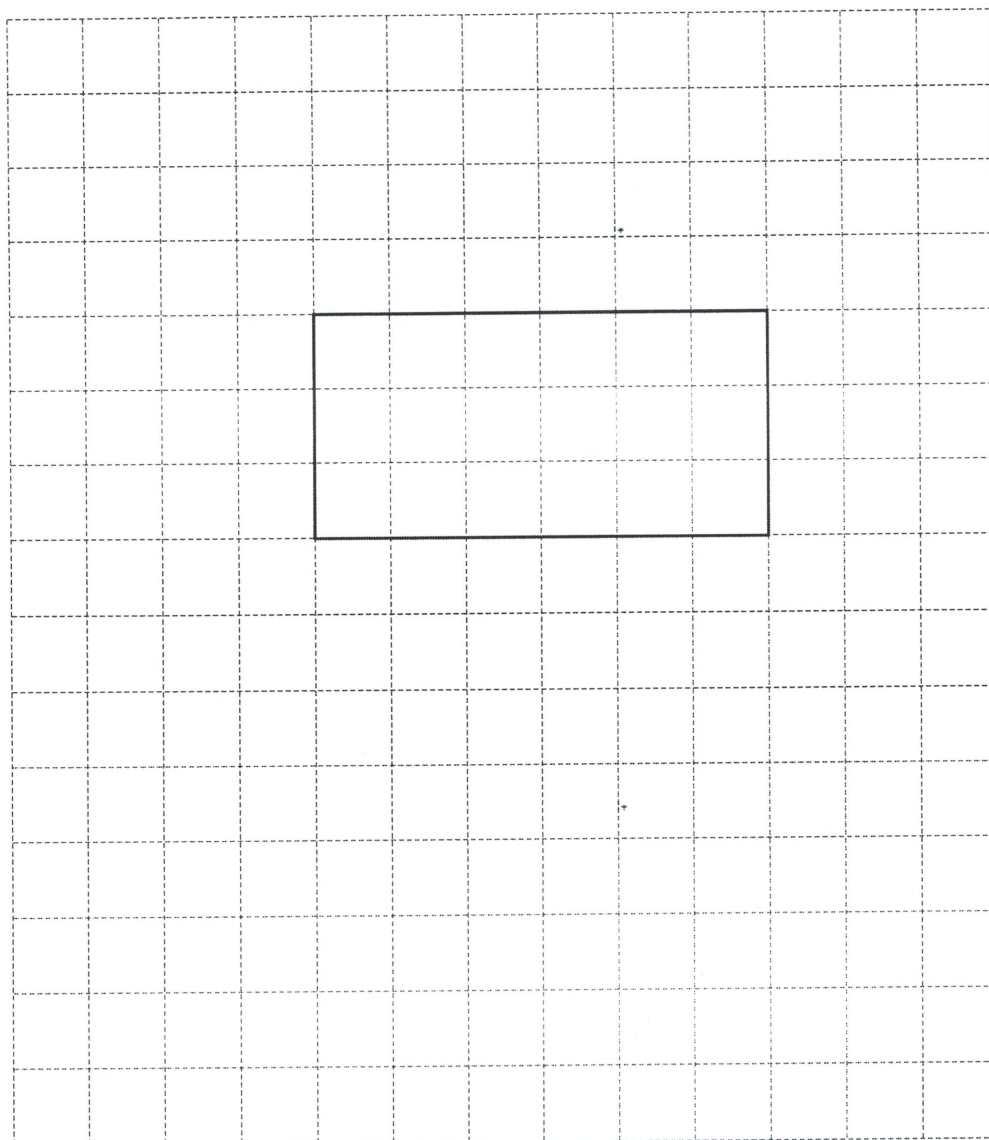
Write down the dimensions of the cuboid.

Answer(b) cm by cm by cm [2]



11 (a) A cuboid measures 6 cm by 3 cm by 2 cm.

(i) On this 1 cm^2 grid, complete the net of the cuboid.

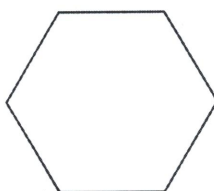


[3]

(ii) Calculate the volume of the cuboid.

..... cm^3 [2]

(b)



Write down the mathematical name of this shape.

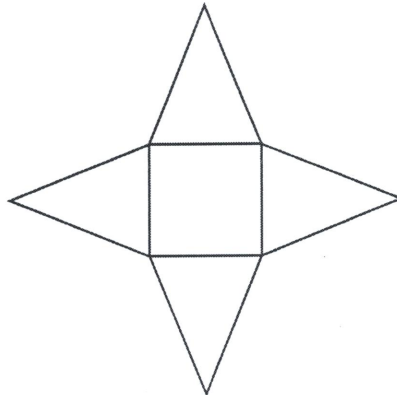
..... [1]

12

(a) Each diagram shows the net of a solid.

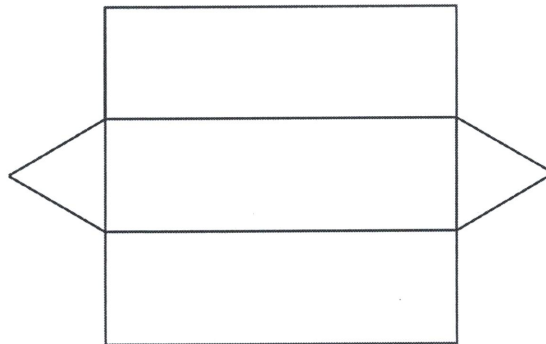
Write down the mathematical name of each solid.

(i)



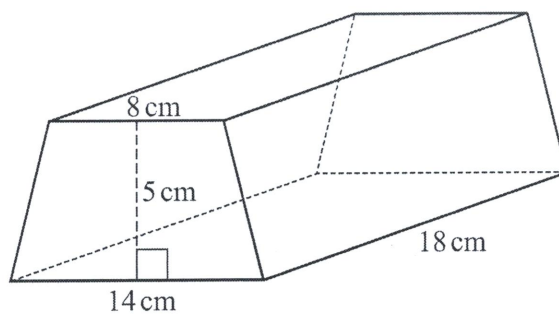
..... [1]

(ii)



..... [1]

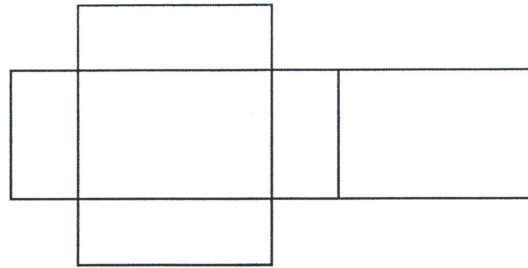
(b) The cross section of this prism is a trapezium.



NOT TO SCALE

Calculate the volume of the prism.

..... cm³ [3]



The diagram shows the net of a solid.

Write down the mathematical name of this solid.

Answer [1]