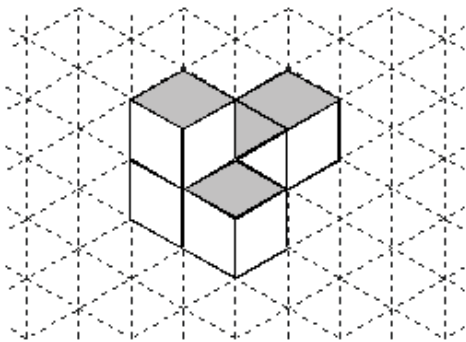
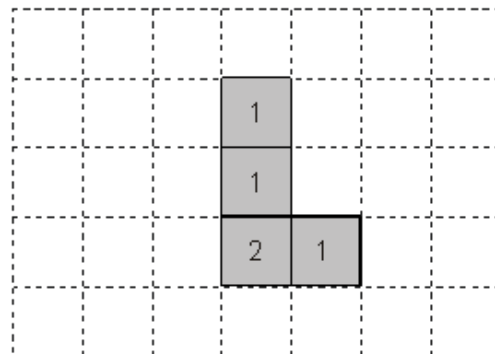


Q1. This solid is made from five cubes.
The plan view shows the number of cubes in each stack.

Solid

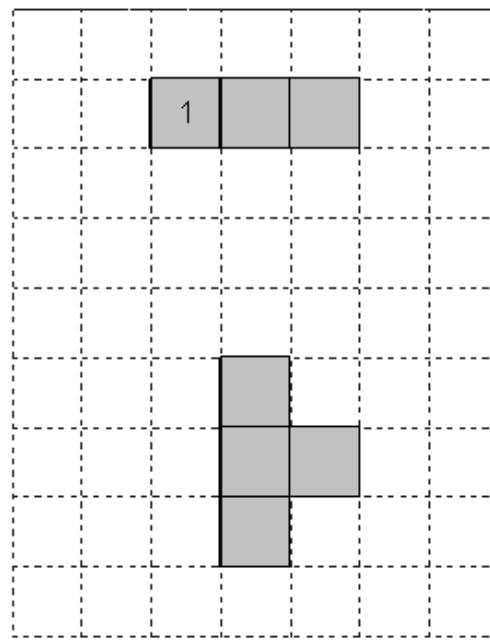
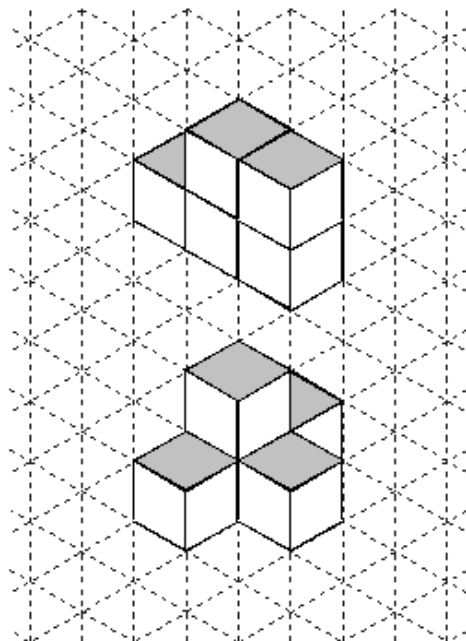


Plan view



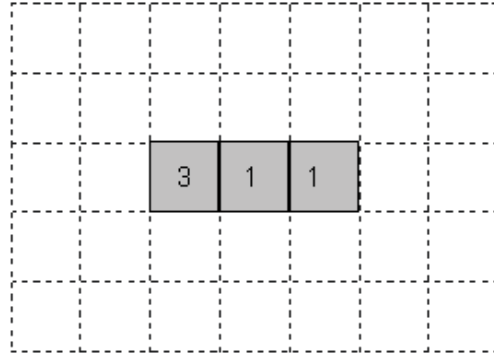
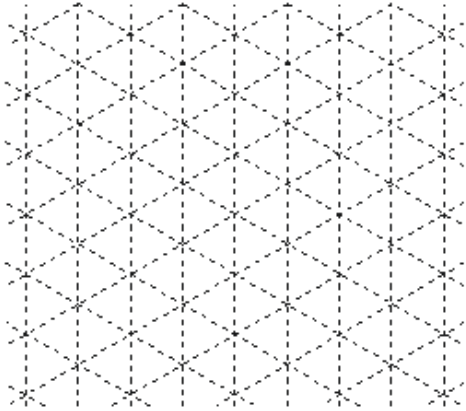
(a) These solids are also made from five cubes.

Complete the numbers in each stack for each solid.



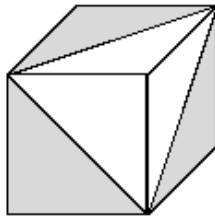
(2)

(b) Draw the solid for this plan view.

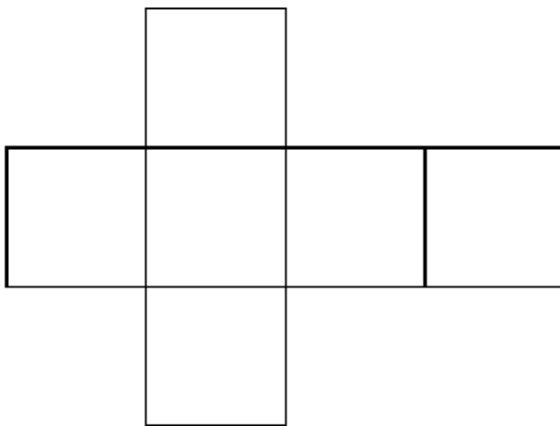


(2)
(Total 4 marks)

Q2. Three faces of this cube have shaded triangles on them. The other three faces are blank.



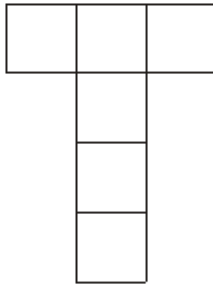
Here is a net of the cube.



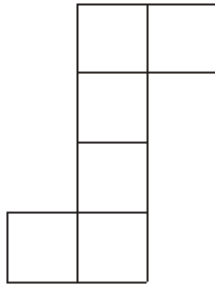
Draw the shaded triangles on the net.

(Total 3 marks)

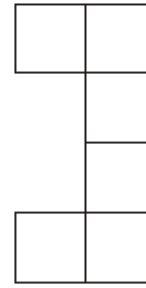
Q3. Which **three** of the following are nets of a cube?



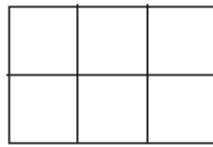
A



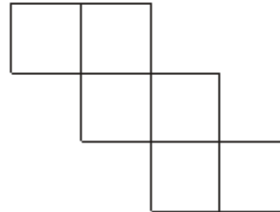
B



C



D

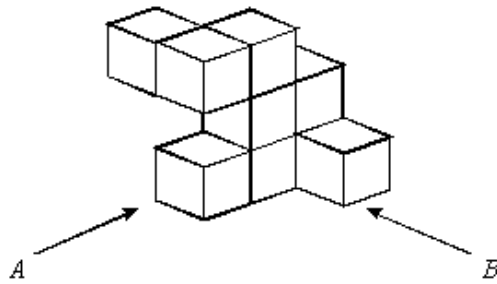


E

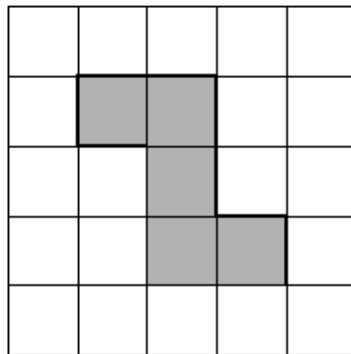
Answer

(Total 2 marks)

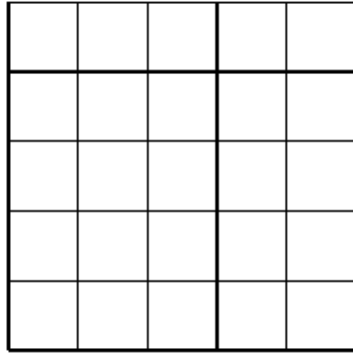
Q4. The diagram represents a solid made from 9 small cubes.



The view of the solid from direction *A* is shown below.

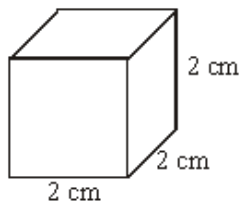


On the grid below, draw the view of the solid from direction *B*.



(Total 2 marks)

Q5. The diagram shows a cube of side 2 cm.



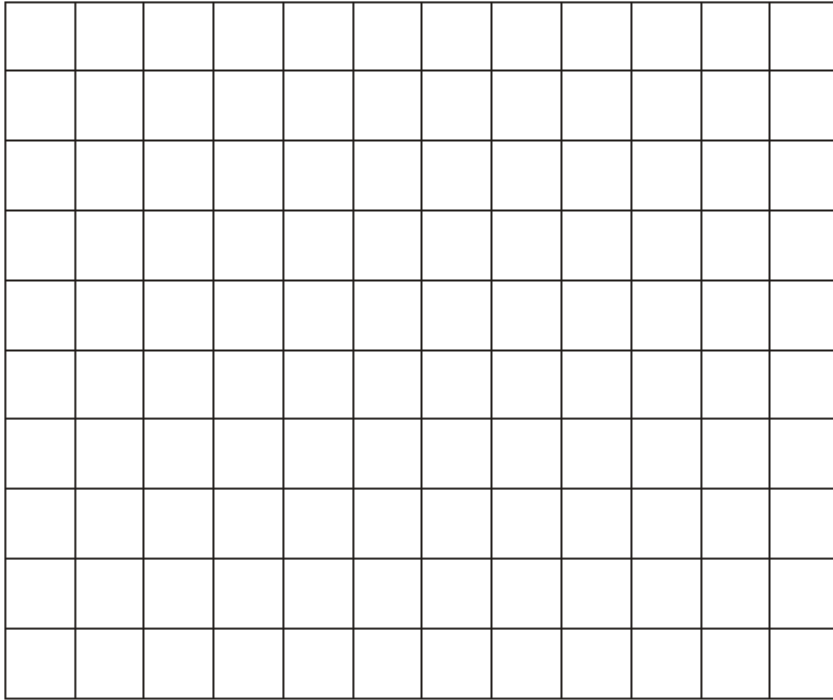
Not to scale

(a) How many faces does a cube have?

Answer

(1)

(b) Draw an accurate net of this cube on the grid below.



(3)
(Total 4 marks)

M1. (a) (1) 2 2

B1

1
2 1
1

B1

(b) Correctly drawn solid

B1 Correct solid incorrect orientation

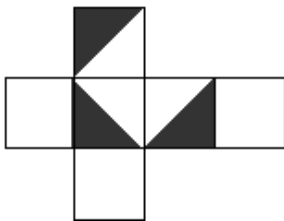
Allow with no shading

Penalise (-1) incorrect shading

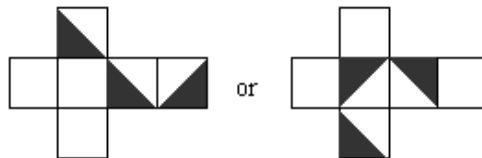
B2

[4]

M2.



oe eg,



B2 For 2 correct and 1 in correct position but in wrong orientation

B1 For 2 correct and 1 in wrong position

B3

[3]

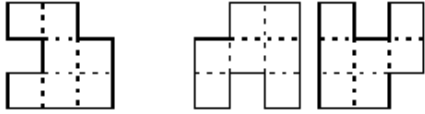
M3. A B and E

-1 eooo

B2

[2]

M4.



B1 with 1 error

SC1 $\pm 90^\circ$ degree rotation

B2

[2]

M5. (a) 6

B1

(b) Correct net

B1 for 4 squares in a row or column B2 for correct net for open-topped cube (± 2 mm) SC1 for correct net in correct scale factor

B3

[4]

E1. Part (a) was well done with most candidates obtaining both marks.

Only about 70% of candidates gained full marks for part (b). Some did not spot that the given diagrams implied a particular orient of the 3-D representation and drew their diagram with the incorrect orient and some shaded faces other than those visible from above. About 5% of candidates scored zero marks.

E2. Nearly all candidates made an attempt at this question and most had some idea of what was required, with some candidates scoring one mark for either doing no shading or too much shading by assuming the hidden three faces were grey. A number of candidates had two triangles in the correct position and one triangle in a correct position but in the wrong orientation and scored two marks.

E3. Many responses had some errors, with *E* usually omitted.

E4. This was well answered with most candidates gaining full marks and nearly all gaining at least one.

E5. Many candidates gained full marks on this question but a few drew the net of an open box, despite giving 6 in answer to part (a).

