FOUNDATION & HIGHER

SAME AT BOTH TIERS

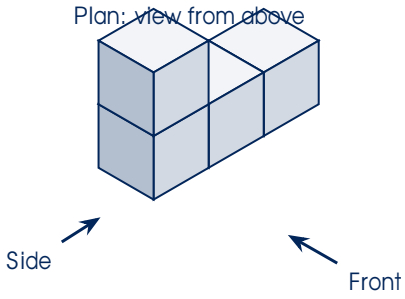
Name ..... Class .....

# G13: Plans and elevations

*Construct and interpret plans and elevations of 3D shapes*

20 marks · 25 minutes · Non-calculator

**1)** The solid is made from four 1 cm cubes.




On the centimetre grids, draw

(a) the plan

(2)

(b) the front elevation

(2)

**[Question 1: 4 marks]**

**2)** Draw the side elevation of the solid in question 1 on the centimetre grid.



**[Question 2: 2 marks]**

**3)** What is the volume of the solid in question 1?

..... $cm^3$

**[Question 3: 1 marks]**

**4)** Name the solid with

(a) a circular plan and a triangular front elevation

.....

(1)

(b) a square plan and a triangular front elevation

.....

(1)

(c) a circular plan and a rectangular front elevation

.....

(1)

**[Question 4: 3 marks]**

**5)** A cuboid is 4 cm long, 2 cm wide and 3 cm high. On the centimetre grids, draw

(a) the plan



(2)

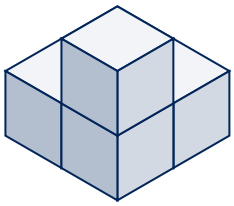
(b) the front elevation (looking at the 4 cm by 3 cm face)



(2)

**[Question 5: 4 marks]**

**6)** This solid is made from 1 cm cubes.



(a) How many cubes are used?

.....

(1)

(b) Draw the plan of the solid on the centimetre grid.



(2)

**[Question 6: 3 marks]**

**7)** A triangular prism lies on one of its rectangular faces. Its triangular ends face the front and the back.

(a) What shape is its plan?

.....

(1)

(b) What shape is its front elevation?

.....

(1)

**[Question 7: 2 marks]**

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**8)** What shape are the plan and elevations of a sphere?

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**[Question 8: 1 marks]**

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**End of paper – 20 marks in total**

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# Answers and brief mark scheme

| Q | Answer | Method / notes |
|---|---|---|
| 1 | (a) 3 by 1 rectangle of squares (b) row of 3 squares with 1 on top of the left square | Each: B2 for correct, B1 for one error. |
| 2 | Column of 2 squares | B2 (B1 for one error). |
| 3 | 4 | B1. |
| 4 | (a) cone (b) square-based pyramid (c) cylinder | B1 each. |
| 5 | (a) 4 cm by 2 cm rectangle (b) 4 cm by 3 cm rectangle | B2 each (B1 for one wrong length). |
| 6 | (a) 5 (b) 2 by 2 square | (a) B1. (b) B2. |
| 7 | (a) rectangle (b) triangle | B1 each. |
| 8 | Circles | B1. |