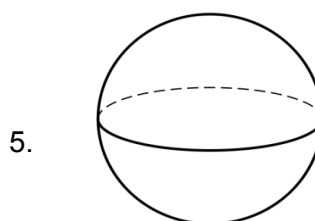
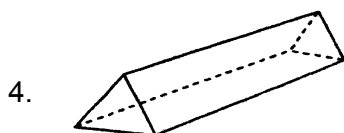
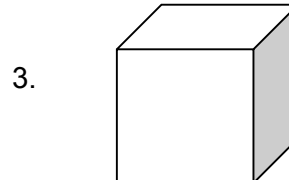
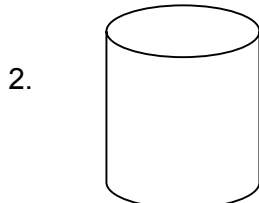
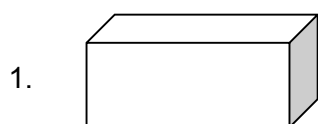


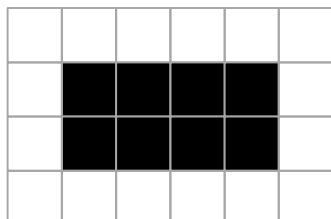
## Topic Check In - 8.06 Three-dimensional shapes

Write down the mathematical name of each 3D solid shown below.

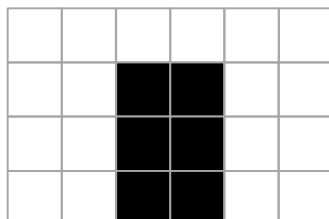


- Name a solid with 12 edges and 6 square faces.
- Name a solid with 5 faces, where 4 are triangular and 1 is square.
- What solid is represented by the plan and elevations below?

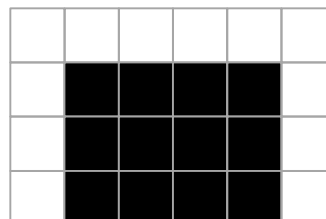
Plan



Side Elevation

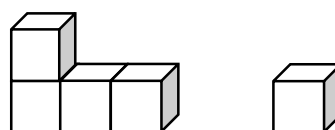
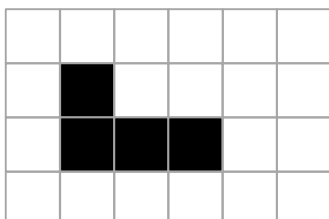


Front Elevation



- A box 12 cm wide, 48 cm long and 24 cm high contains 8 balls, all with radius 6 cm. Sketch the plan and elevations for the arrangement of balls within the box.
- Tom builds an L-shaped solid using 4 cubes and starts drawing the side elevation for his model. He adds an extra cube to the solid without affecting the side elevation. In how many different positions could he have put his extra cube?

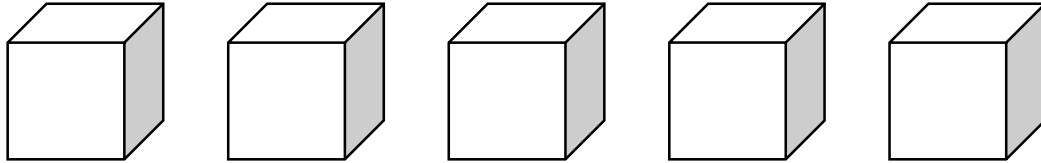
Side Elevation



# GCSE (9-1) MATHEMATICS

## Extension

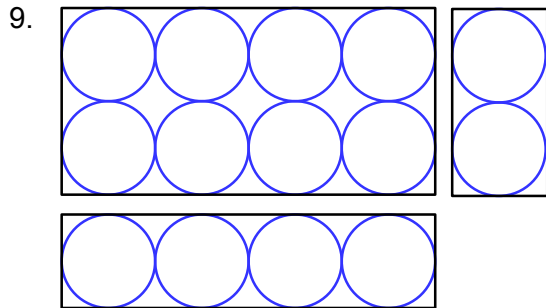
How many different, non-congruent, 5 cube solids can you make? Record your designs as 3D representations on isometric paper and as plans and elevations on squared paper.



# GCSE (9-1) MATHEMATICS

## Answers

1. Cuboid
2. Cylinder
3. Cube
4. Triangular prism
5. Sphere
6. Cube
7. (Square-based) Pyramid
8. Cuboid



10. Arguments could be made for 3, 4, 6 or 8 positions as it will depend on interpretation.

## Extension

Students to peer assess each other's work.



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Assessment Objective	Qu.	Topic	R	A	G
AO1	1	Recognise a cuboid.			
AO1	2	Recognise a cylinder.			
AO1	3	Recognise a cube.			
AO1	4	Recognise a triangular prism.			
AO1	5	Recognise a sphere.			
AO2	6	Use properties of a cube.			
AO2	7	Use properties of a pyramid.			
AO2	8	Interpret plans and elevations of a cuboid.			
AO3	9	Recognise that a sphere is represented as a circle in plans and elevations.			
AO3	10	Represent 3D shapes in 2 dimensions.			

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