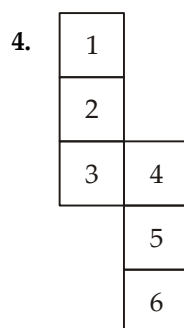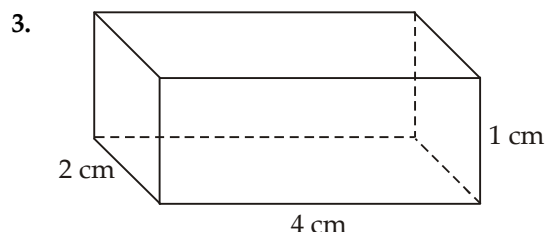## Chapter 18 : Visualising Solid Shapes

ANSWER KEYS

EXERCISE 18.1
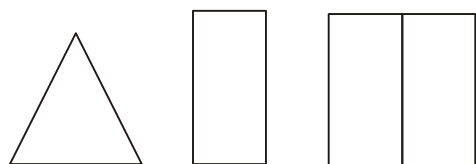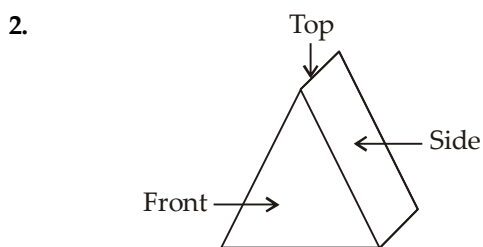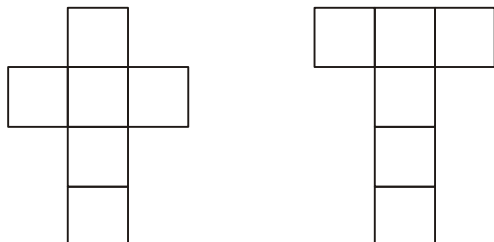
1. (*i*) **Sphere:** Football, globe, round orange.
   (*ii*) **Cone:** Ice-cream cone, clown's cap, conical tent.
   (*iii*) **Cuboid:** Match box, brick, book.
   (*iv*) **Cylinder:** Pencil, road-roller, pillar.

2.

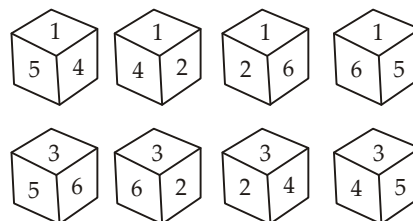| Name of solid	Number of faces	Number of edges	Number of vertices
Cube	6	12	8
Cuboid	6	12	8
Cone	2	1	1
Cylinder	3	2	Nil
Sphere	1	Nil	Nil

EXERCISE 18.2

1. Two different ways for making a cube.

2.

(*i*) Front (A triangle)
(*ii*) Side (A rectangle)
(*iii*) Top (Two rectangles)

3.

2 cm, 4 cm, 1 cm

4.

Procedure: Fold the given faces in such a way that 1 is the upper face and 3 is the bottom face.

Thus, 1 lies opposite 3;

2 lies opposite 5;

4 lies opposite 6.

5.
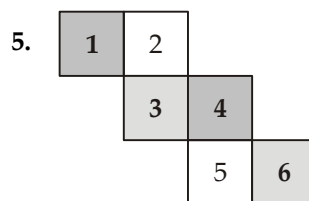
No, because one pair of opposite faces will have 1 and 4 on them whose total is not 7 and another pair of opposite faces will have 3 and 6 on them whose total is also not 7.
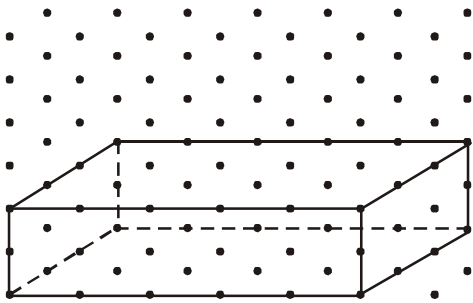
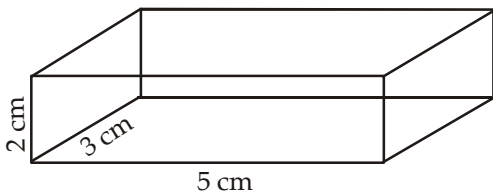6. **Step 1:** We draw a rectangle of dimensions 5 units × 2 units to show the front face.
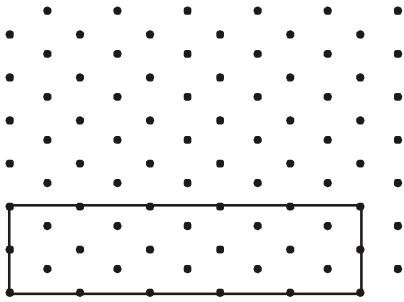
Step 2: We draw four parallel line segments of length 3 units starting from the four corners of the rectangle.
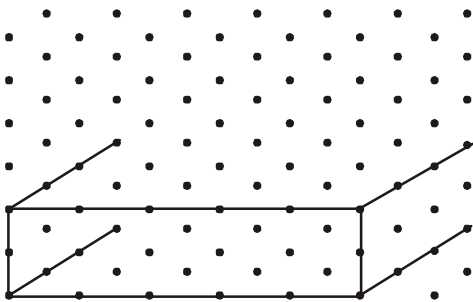
**Step 3:** We connect the matching corners with line segments.

**Step 4:** Thus, given here is the isometric sketch of a cuboid of dimensions 5 units × 3 units × 2 units.

7. Let us draw an oblique sketch of a cuboid of dimensions 4 cm × 2 cm × 3 cm.

Step 1: We draw a rectangle of sides 4 cm × 3 cm.

Step 2: We draw opposite faces. Sizes of the faces should be same.

Step 3: We join the corresponding corners.

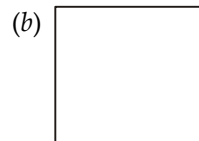**Step 4:** For hidden edges, draw dotted lines.
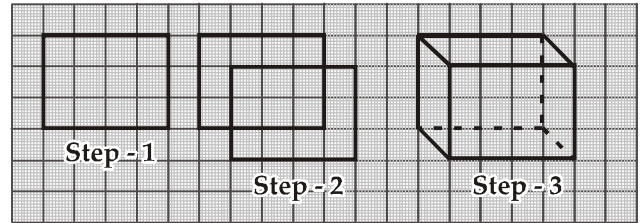
HOTS QUESTIONS

1. (*i*) Cuboid
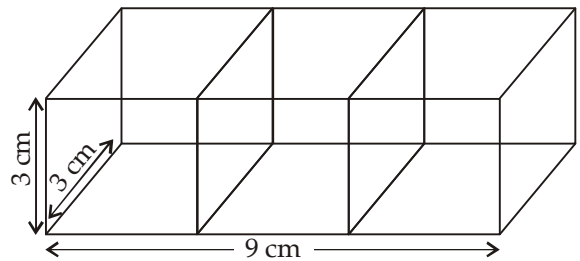
(*ii*) Length = 9 cm, breadth = 3 cm, height = 3 cm.

(*iii*) (*a*)

Top view
(A rectangle)

(*b*)

Side view
(A square)

Side view
(A rectangle)