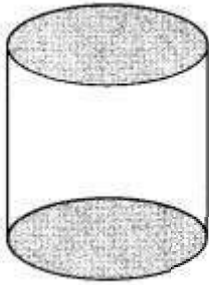# MATHEMATICS

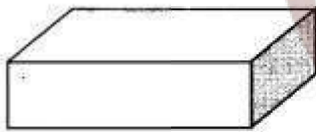## Chapter 15: Visualising Solid Shapes

Important Questions

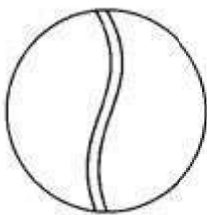## Multiple Choice Questions-

Question 1. The name of the solid shape is

(a) cone

(b) cylinder

(c) sphere

(d) cube

Question 2. The name of the solid shape is
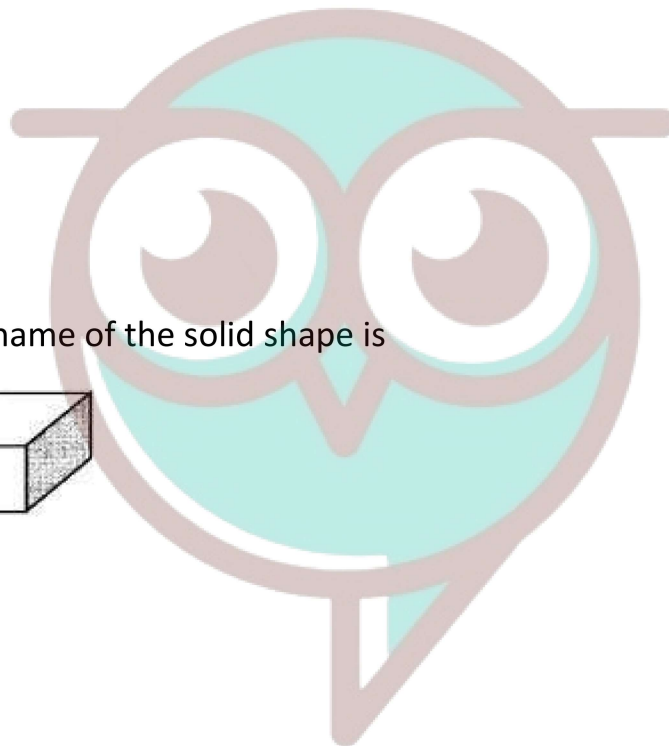

(a) cuboid

(b) cube

(c) pyramid

(d) cone

Question 3. The name of the solid shape is

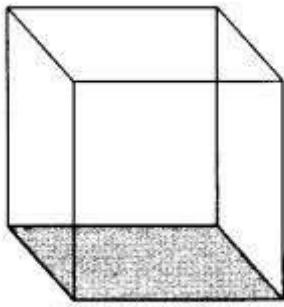

(a) cylinder

(b) cone

(c) sphere

(d) cube

Question 4. The name of the solid shape is

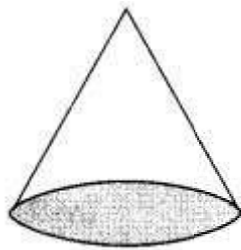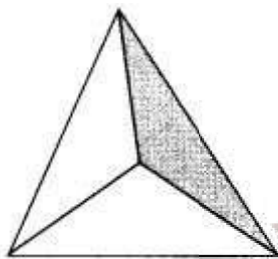(a) cube

(b) cylinder

(c) cone

(d) sphere

Question 5. The name of the solid shape is

(a) cylinder

(b) cone

(c) cuboid

(d) sphere
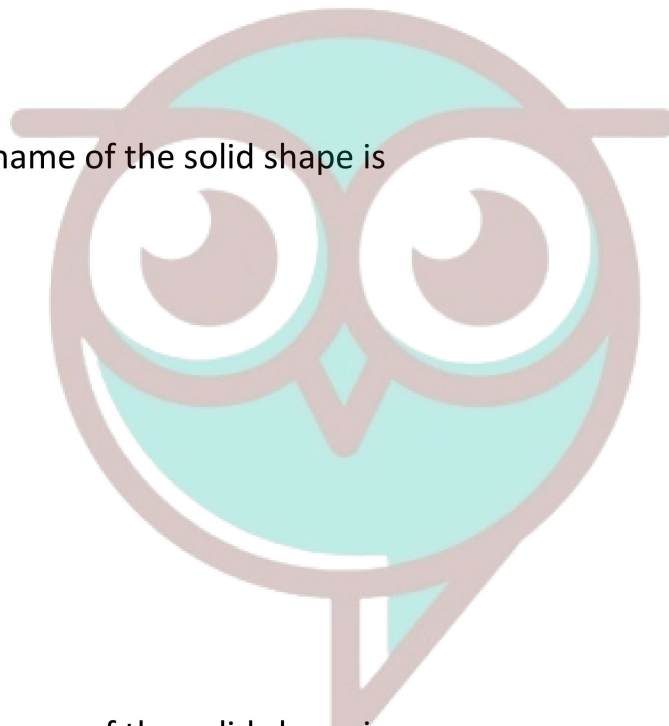
Question 6. The name of the solid shape is

(a) cylinder

(b) cone

(c) sphere

(d) pyramid

Question 7. The number of vertices of a cube is

(a) 8

(b) 12

(c) 6

(d) 3

Question 8. The number of edges of a cube is

(a) 8

(b) 12

(c) 6

(d) 3

Question 9. The number of faces of a cube is
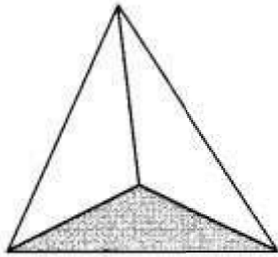
(a) 8

(b) 12

(c) 6

(d) 3

Question 10. The number of vertices of the solid shape is
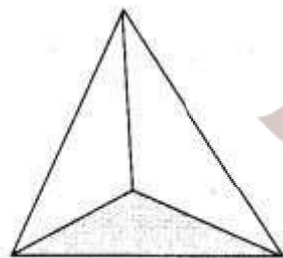
(a) 1

(b) 2

(c) 3

(d) 4

Question 11. The number of faces of the solid shape is

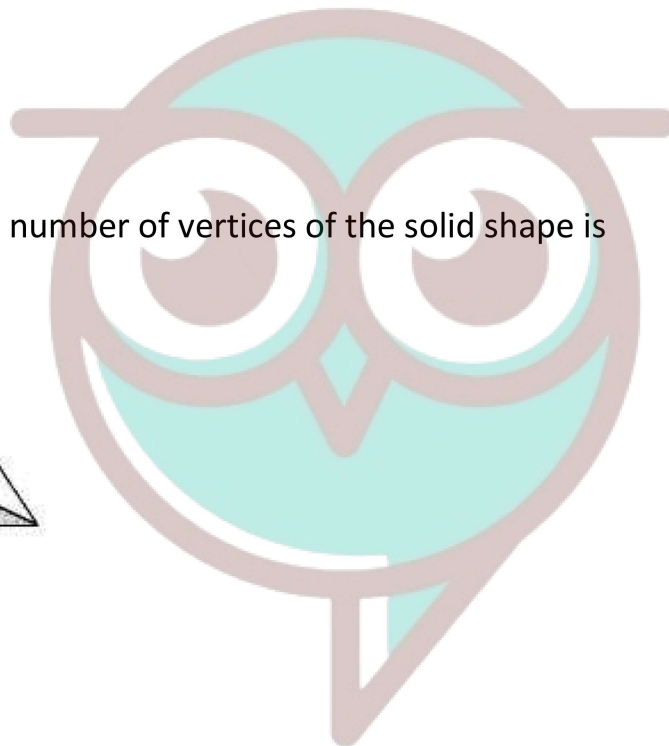(a) 1

(b) 2

(c) 3

(d) 4

Question 12. The number of edges of the solid shape is

(a) 1

(b) 2

(c) 3

(d) 6

Question 13. The number of vertices of the solid shape is

(a) 9

(b) 4

(c) 6

(d) 8

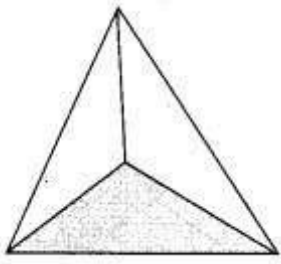Question 14. The number of faces of the solid shape is

(a) 4

(b) 6

(c) 9

(d) 8

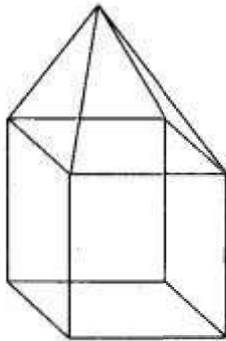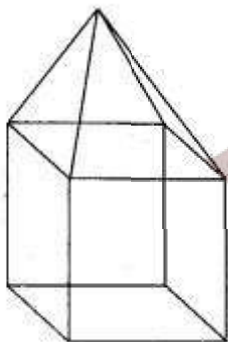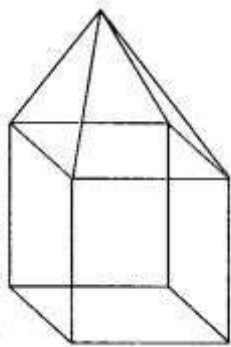Question 15. The number of edges of the solid shape is

(a) 16

(b) 9

(c) 6

(d) 4

Very Short Questions:

1. If three cubes of dimensions 2 cm × 2 cm × 2 cm are placed end to end, what would be the dimension of the resulting cuboid?

2. Answer the following:

    (i) Why a cone is not a pyramid?

    (ii) How many dimension a solid have?

    (iii) Name the solid having one curved and two flat faces but no vertex.

3. Write down the number of edges on each of the following solid figures:

    (i) Cube

    (ii) Tetrahedron

    (iii) Sphere

    (iv) Triangular prism

4. What cross-section do you get when you give a horizontal cut to an ice cream cone?

5. Determine the number of edges, vertices and faces in the given figure.
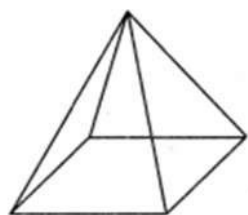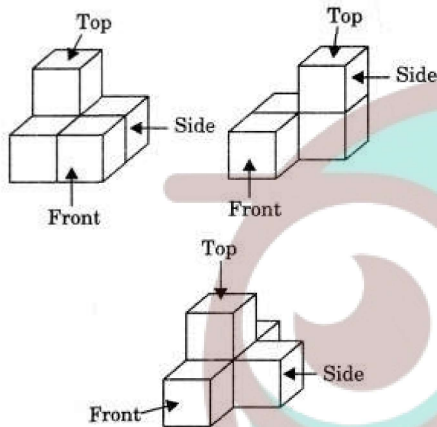

6. Draw the sketch of two figure that has no edge.

7. Draw the sketches of two figures that have no vertex.

8. Draw the sketches of two figures that have no vertex.

9. What shape would we get from the given figure?
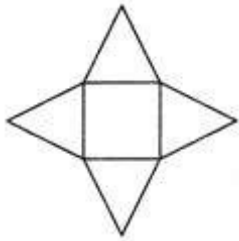
Short Questions :

1. For the solids given below sketch the front, side and top view

2. Match the following:

Column I		Column II	
(i)	cube	(a)	cylinder (two circles with bar)
(ii)	cylinder	(b)	cone with circle on top
(iii)	cone	(c)	triangle with inscribed triangle
(iv)	tetrahedron	(d)	ball
(v)	ball	(e)	cross shape

3. Complete the following table:

Name of solid	Number of vertices (V)	Number of faces (F)	Number of edges (E)
(i) Cube	___	___	___
(ii) Cuboid	___	___	___
(iii) Cone	___	___	___
(iv) Cylinder	___	___	___
(v) Triangular pyramid	___	___	___
(vi) Rectangular pyramid	___	___	___

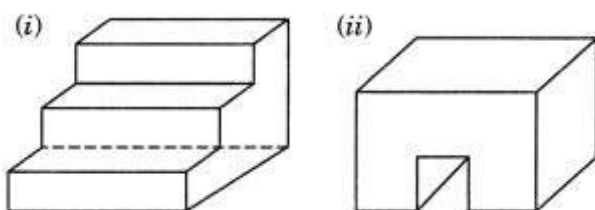4. Draw a plan, front and side elevations of the following solids.
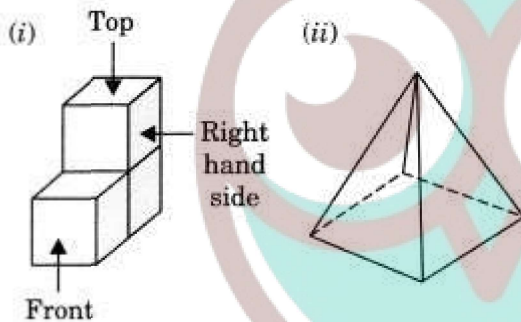
5. Name the solid that would be formed by each net:

Long Questions :

1. Name the solids that have:

   (i) 1 curved surface

   (ii) 4 faces

   (iii) 6 faces

   (iv) 5 faces and 5 vertices

   (v) 8 triangular faces

   (vi) 6 triangular faces and 2 hexagonal faces.

2. Draw the top, side and front views of the given solids:

3. Draw the net of a cuboid having same breadth and height, but length double the breadth.

4. Draw the nets of the following:

(i) Triangular prisms

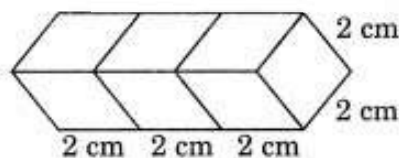(ii) Tetrahedron

(iii) Cuboid.

Answer Key-

Multiple Choice questions-

1. (b) cylinder
2. (a) cuboid
3. (c) sphere
4. (a) cube
5. (b) cone
6. (d) pyramid
7. (a) 8
8. (b) 12
9. (c) 6
10. (d) 4
11. (d) 4
12. (d) 6
13. (a) 9
14. (c) 9
15. (a) 16

Very Short Answer :

1. Length of the resulting cuboid = 2 cm + 2 cm + 2 cm = 6 cm

   Breadth = 2 cm

   Height = 2 cm

   Hence the required dimensions = 6 cm × 2 cm × 2 cm.

2. (i) Cone is not a pyramid because its base is not a polygon.

   (ii) Three.
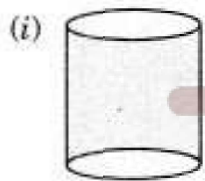
   (iii) Cylinder

3. (i) 12

(ii) 6

(iii) 0

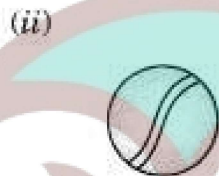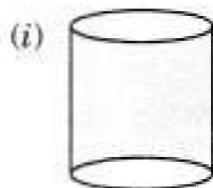(iv) 9

4. Circle

5. Edges = 8

Vertices = 5

Faces = 5
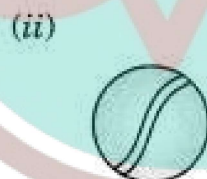
6.

(i) Cylinder

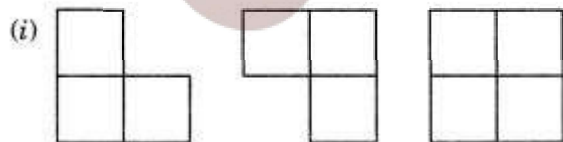(ii) Sphere

7.

(i) Cylinder

(ii) Sphere

8. Sphere: Football, Earth, Round table

Cone: Conical funnel, ice cream cone, conical cracker.

9. From the given net, we get a rectangular pyramid.
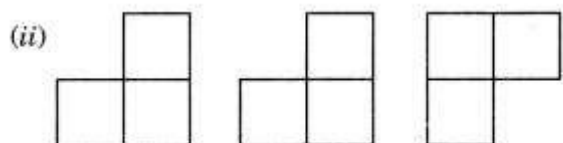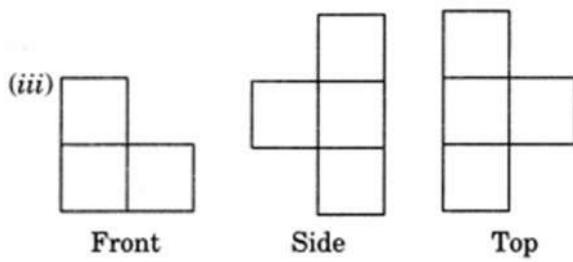
Short Answer :

1.

(i) Front | Side | Top

(ii) Front | Side | Top

(iii)

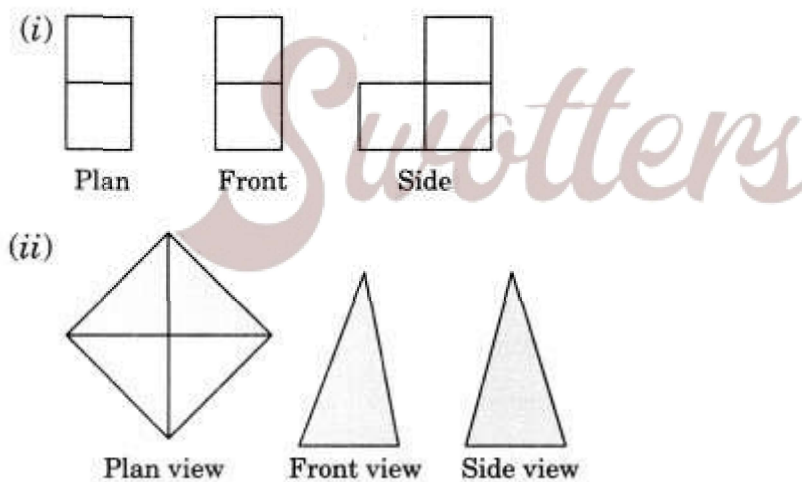Front   Side   Top

2. (i) → (e)

(ii) → (a)

(iii) → (*b*)

(iv) → (c)

(v) → (d)

3.

Name of solid	Number of vertices (V)	Number of faces (F)	Number of edges (E)
(*i*) Cube	8	6	12
(*ii*) Cuboid	8	6	12
(*iii*) Cone	1	1	0
(*iv*) Cylinder	0	2	0
(*v*) Triangular pyramid	4	4	6
(*vi*) Rectangular pyramid	5	5	8

4.

(i)

Plan   Front   Side

(ii)

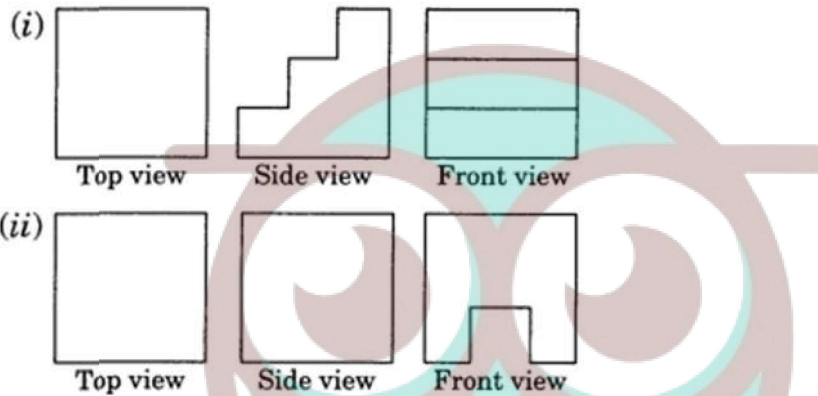Plan view   Front view   Side view

5. (i) Triangular pyramid

(ii) Square pyramid

(iii) Hexagonal pyramid

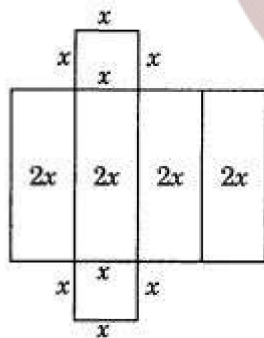## Long Answer :

1.   (i) Cylinder

     (ii) Tetrahedron

     (iii) Cube and cuboid

     (iv) Square pyramid or rectangular pyramid

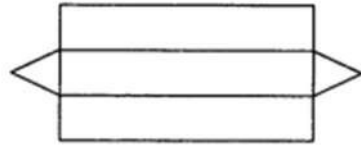   (v) Regular octahedron

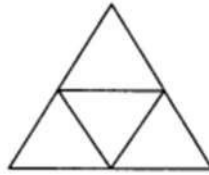   (vi) Hexagonal prism.

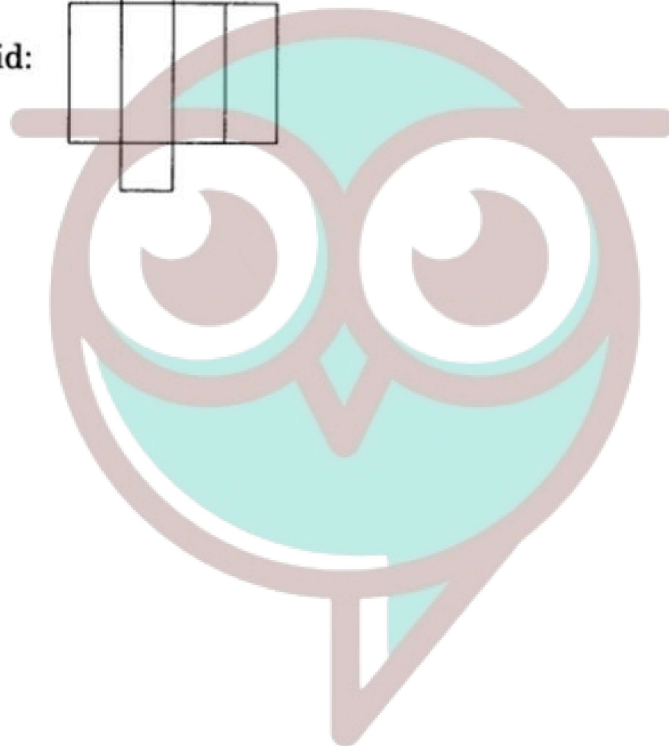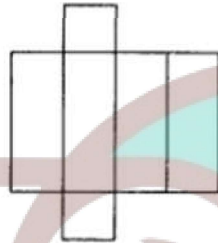2.

3.

4.

(i) Triangular prisms:

(ii) Tetrahedron:

(iii) Cuboid: