

1. Verify Euler's formula for the following solids.

- a) Regular Hexahedron
- b) Heptagonal Prism
- c) Octagonal Pyramid
- d) Regular Octahedron

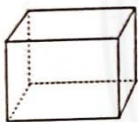
2. Find the number of faces of a polyhedron having 4 vertices and 6 edges.

3. Find the number of edges of a polyhedron having 10 vertices and 7 faces.

4. Find the number of vertices of a polyhedron having 18 edges and 8 faces.

5. Draw the net of the following solids.

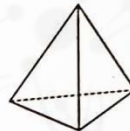
a.



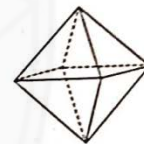
b.



c.

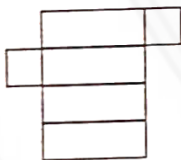


d.



6. Name the solid represented by the following nets.

a.



b.



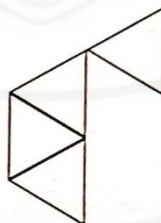
c.



d.



7. Find the 3D solid represented by the adjoining net and hence find the number of vertices, edges and faces of the solid.



8. Name different plane shapes needed to draw the nets of the following solids.

- a) Triangular Prism
- b) Cuboid
- c) Cylinder

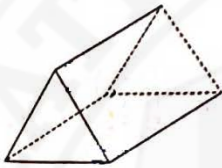
d) Hexagonal Pyramid

9. Classify the following solids into regular and irregular solids.

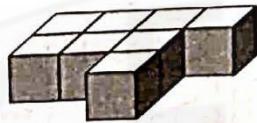
- a) Triangular Pyramid with each side of length 3 cm
- b) Cube with each side of length 5 cm
- c) Hexahedron with each face a triangle and each side of length 4 cm
- d) Pentagonal Prism with each side of length 3 cm.

10. Classify the following solids into convex and concave solids.

a.



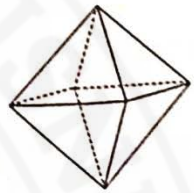
b.



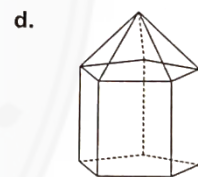
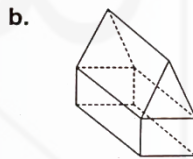
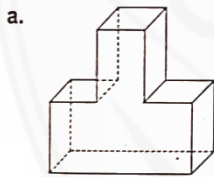
c.



d.



1. Draw the oblique sketch of the following Solids.
 - a) Triangular Pyramid with each side of length 4 cm
 - b) Cube with each side of length 4 cm
 - c) Cuboid with length 4 cm, breadth 3 cm and height 2 cm.
 - d) Square Pyramid with each side of length 4 cm.
2. Draw the isometric sketch of the solids in the above question.
3. Draw the polyhedrons with the following faces.
 - a) 2 triangles and 3 rectangles
 - b) 2 pentagons and 5 rectangles
 - c) 4 triangles and 1 square
 - d) 6 triangles and 1 hexagon
4. Identify the polyhedrons used In the following solids.

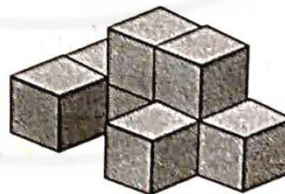


5. Draw the different views of the solids in question 4.
6. Draw the top view, front view and side view of the adjoining solid.



7. Draw the shadow of the adjoining solid when the source of light is in the following Positions

- a) front of the solid
- b) top of the solid
- c) side of the solid



8. Draw a 2D representation of the floor of your school building on which your class room is located.

1. Match the following 3D solids in the first column to the corresponding number of faces in the second column.

	3 D solids		Number of faces
a	Tetrahedron	i	20
b	Icosahedron	ii	8
c	Octahedron	iii	6
d	Hexahedron	iv	4

2. State true or false.
- A cone is a polyhedron with 2 faces,
 - A cube is a regular polyhedron
 - A square prism is a concave polyhedron.
 - A triangular prism is a convex polyhedron.
3. Find the number of edges of a polyhedron having 7 vertices and 7 faces.
4. Verify Euler's formula for a regular tetrahedron.
5. Identify the polyhedrons used in the adjoining solid and draw the different views of the adjoining solid.

