

MATHEMATICS

CLASS VIII

SA-1

Assignment No. 7

Ch 13 Representation of Three Dimensional Figures

1. Tick the correct alternative :
 - i. The number of faces of an octagonal pyramid
 - a) 8
 - b) 9
 - c) 16
 - d) 17
 - ii. The Euler's formula cannot be applied for
 - a) Cone
 - b) Sphere
 - c) Cylinder
 - d) All of these
 - iii. Euler's formula is
 - a) $V + F - 2 = E$
 - b) $F + E - V = 2$
 - c) $E + V + F = 2$
 - d) $F + V - E = 2$
 - iv. If $F = 20$ and $V = 12$, then value of E is
 - a) 8
 - b) 15
 - c) 30
 - d) 34
2. Can a polyhedron have for its faces:
 - i. 3 triangles?
 - ii. 4 triangles?
 - iii. A square and four triangles?
3. Is it possible to have a polyhedron with any given number of faces?
4. Is a square prism same as cube?
5. Can a polyhedron have 10 faces, 20 edges and 15 vertices?
6. How many faces, vertices and edges does a tetrahedron have? Verify Euler's formula for the same.
7. Verify Euler's formula for a hexagonal prism.
8. How many edges does a polyhedron have which has four faces and four vertices?
9. A polyhedron has 30 edges and 20 vertices. How many faces does this polyhedron have?
10. A polyhedron has 7 faces and 15 edges. How many vertices does this polyhedron have? Can you give a special name to this polyhedron?
11. Calculate the number of faces of a polyhedron which has 9 edges and 6 vertices. What special name can you give to this polyhedron?
12. Calculate the number of vertices of a polyhedron which has 16 faces and 30 edges.
13. How many faces, edges and vertices does
 - i. a prism have?
 - ii. a pyramid whose base is a polygon of n sides have?
13. If a polyhedron has 6 faces and 8 vertices, find its number of edges.
14. A polyhedron has 30 edges and 20 vertices. Find the number of its faces.