

## Visualising Solid shapes

**Face:** The surface of a solid is called its face. It may be plane or curved.

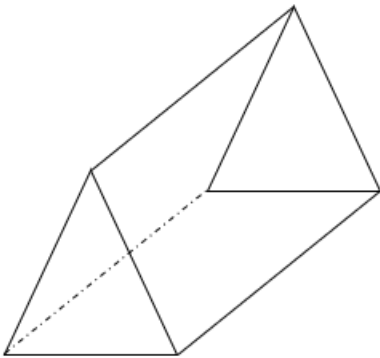
**Edge:** The line segment where two faces meet is called the edge.

**Vertex:** The Point where three or more faces meet is called the vertex.

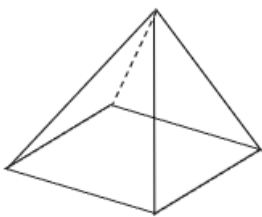
**Nested Solids:** We see many objects that are made of two or more solids, that is, two or more solids are nested on each other to form that particular solid shape.

**Triangular Prism:** A triangular prism is made up of two parallel end faces each one of which is a triangle and three lateral faces each one of which is a rectangle.

It has 5 faces, 9 edges, and 6 vertices.



**Square Pyramid:** A square pyramid is a solid whose base is a square and the side faces are triangle having a common vertex. It has 5 faces, 8 edges, and 5 vertices.



**Polyhedrons:** A solid bounded by plane surfaces is known as polyhedrons.

**Regular Polyhedron:** A polyhedron whose faces are congruent regular polygons is called a regular polyhedron.

**Convex Polyhedron:** A polyhedron whose surfaces do not intersect with each other is called convex polyhedron. Its diagonals always lie inside.

**Concave Polyhedron:** A Polyhedron, some of whose plane sections are concave polygons are called concave polyhedron.

**Tetrahedron:** A regular tetrahedron has 4 faces, 6 edges, and 4 vertices. In a tetrahedron, each of its faces is an equilateral triangle.

**Hexahedron:** A regular hexahedron has 6 faces, 12 edges, and 8 vertices. It is also known as a cube.

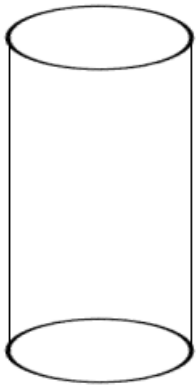
**Octahedron:** An octahedron has 8 faces, 12 edges, and 6 vertices. In a regular octahedron, each of its faces is equilateral triangles.

**Euler's Formula:** It is a relationship between the faces, edges, and vertices of a polyhedron.

*it is given as*

$$\mathbf{Faces+Vertices-Edges=2}$$

**Cylinder:**



**Cone:**



**Cuboid:**

