Solid Shapes

Objects that occupy space and have three dimensions [length, breadth and height or depth]

Chart

Types of Solids

(a) Prism : A solid whose base and top are identical polygons and side faces are rectangles, is called prism.

(b) Pyramid : A solid whose base is any polygon and side faces are triangles, all of which meets at the top to form a vertex is called a pyramid. Figures shows a pentagonal pyramid.

(c) Sphere : Sphere is a solid whose every point is equidistant from a fixed point. Figure shows the sphere.

Euler's formula

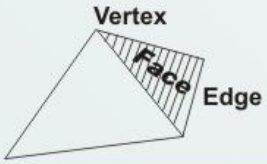
$V + F - E = 2$

Vertex ← Face → Edges

eg : For Triangular pyramid

$V = 4 ; E = 6 ; F = 4$

$\therefore\ 4 + 4 - 6 = 2$



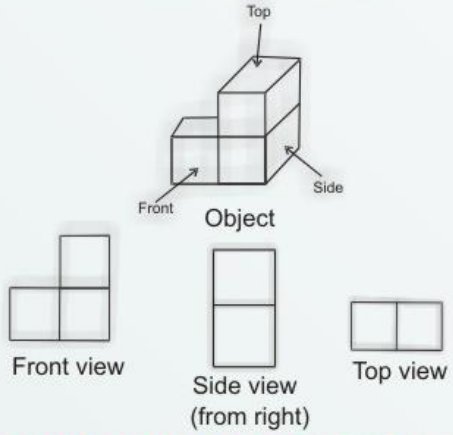
Polyhedron

A solid which is made up of polygonal regions called faces is called a polyhedron.

(a) Convex polyhedrons : The idea of convex polyhedrons comes from convex polygon. A convex polyhedron is one whose all faces are convex polygons.

(b) Regular polyhedron : A polyhedron is regular if all its faces are regular polygons and same number of faces meet at each vertex.

View of 3-D Shapes



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2 - D Representation of a 3- D figure