## 

- 2 Dimensional or 2-D shapes are plane shapes having length and breadth ; ex triangle, square, circle
- 3-dimensional or 3- D shapes are solid objects that occupy space and have length, breadth and height (depth): cube, cuboid, cone ,sphere
- 3-D objects look differently from different positions, so they can be drawn from different perspectives
- Hence as 3-D object has different views like front view, side view and top view



Different Views of a 3-D object

Object	Tonviow	Frontiviow	Sidoviow
Object			Side view

- Map depicts only location of object/place in relation to other objects/places
- While drawing a picture, we try to represent it exactly as seen from the perspective, with all fine details but perspective is not important for map
- Map makes use of symbols and the distances mentioned are proportional to the actual distances on the ground.
- A proper scale is chosen to show the reduction in real distances/ dimension proportionately to distances/dimensions on paper
- There is no reference concept in map ; objects that are closer to the observer are of the same size as those that are farther away

A net is a pattern of two-dimensions that can be folded to make a three dimensional figure

\_\_on folding





Polyhodrons:		Briem	Duramid
<ul> <li>Polyhedrons:</li> <li>Polyhedrons are 3-D objects or solids made up of polygonal regions called as faces. Faces (F) meet at line segments called as edges (E)</li> <li>Edges meet at points called as vertices (V)</li> <li>Diagonals connect two vertices that do not lie on the same face.</li> <li>Regular polyhedron or platonic solids : faces are made up of regular polygons and same number of faces meet at each vertex Ex. Cube, tetrahedron, octahedron</li> <li>2 important members of polyhedron family are pyramids and prisms</li> </ul>		<ul> <li>a polyhedron whose base and top are congruent polygons and other faces (lateral faces) are parallelograms in shape</li> <li>Prism has2 bases</li> </ul>	<ul> <li>polyhedron whose base is polygon and lateral faces are triangles with a common vertex</li> <li>model of a pyramid: join all the corners of a polygon to a point not in its plane</li> </ul>
Examples of polyhedrons Cube Vertex Face Edge	Cone	Pentagonal prism	Pyramid has one base Pentagonal pyramid pyramid
Triangular prism Cuboid	Sphere Cylinder	Eulers formula: for polyhedron : F-	+ V = E + 2
<ul> <li>The above also represent convex polyhedrons: all diagonals are in the interior f the polyhedron</li> <li>Even if one diagonal is in the exterior ,it is a non-convex polyhedron</li> </ul>	Examples of non convex polyhedrons	(a) (b) <b>S. No Polyhedron F V F</b> (a) Tetrahedron 4 4 (b) Cube 6 8 (c) Pentagonal 7 10 prism 1	(c) <b>+ V E F + V -E</b> 8 6 2 14 12 2 17 15 2