SECTIONS OF SOLIDS

ONE OF ENGINEERING APPLICATIONOF PROJECTION OF SOLIDS IS SECTION OF SOLIDS.

- Hidden features of an object are shown using dotted lines in their projected views
- When there are too many hidden features, it becomes difficult to visualize the object
- In such cases one usually shows a sectioned view of the solid – the view obtained by virtually cutting the solid by a plane called the section (cutting) plane and removing the part between the observer and the plane

SECTIONING A SOLID.

An object (here a solid) is cut by some imaginary cutting plane to understand internal details of that object.

The action of cutting is called SECTIONING a solid

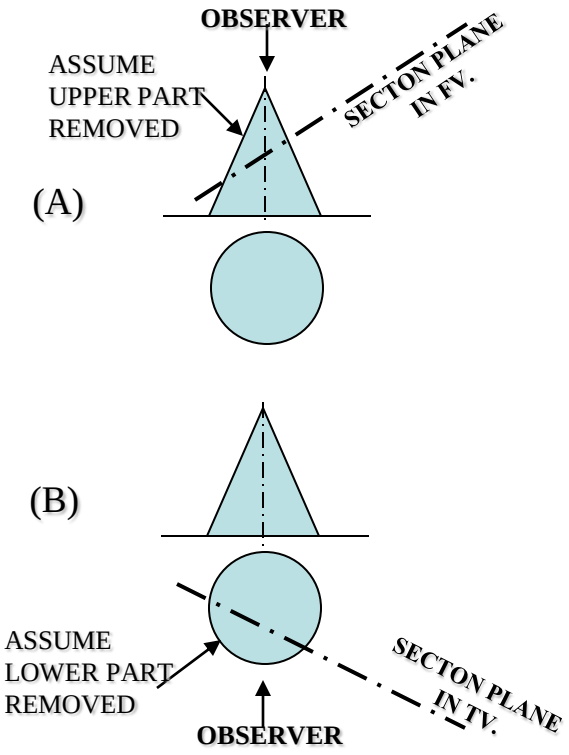
&

The plane of cutting is called SECTION PLANE.

Two cutting actions means section planes are recommended.

A) Section Plane perpendicular to Vp and inclined to Hp.
(This is a definition of an Aux. Inclined Plane i.e. A.I.P.)
NOTE:- This section plane appears as a straight line in FV.

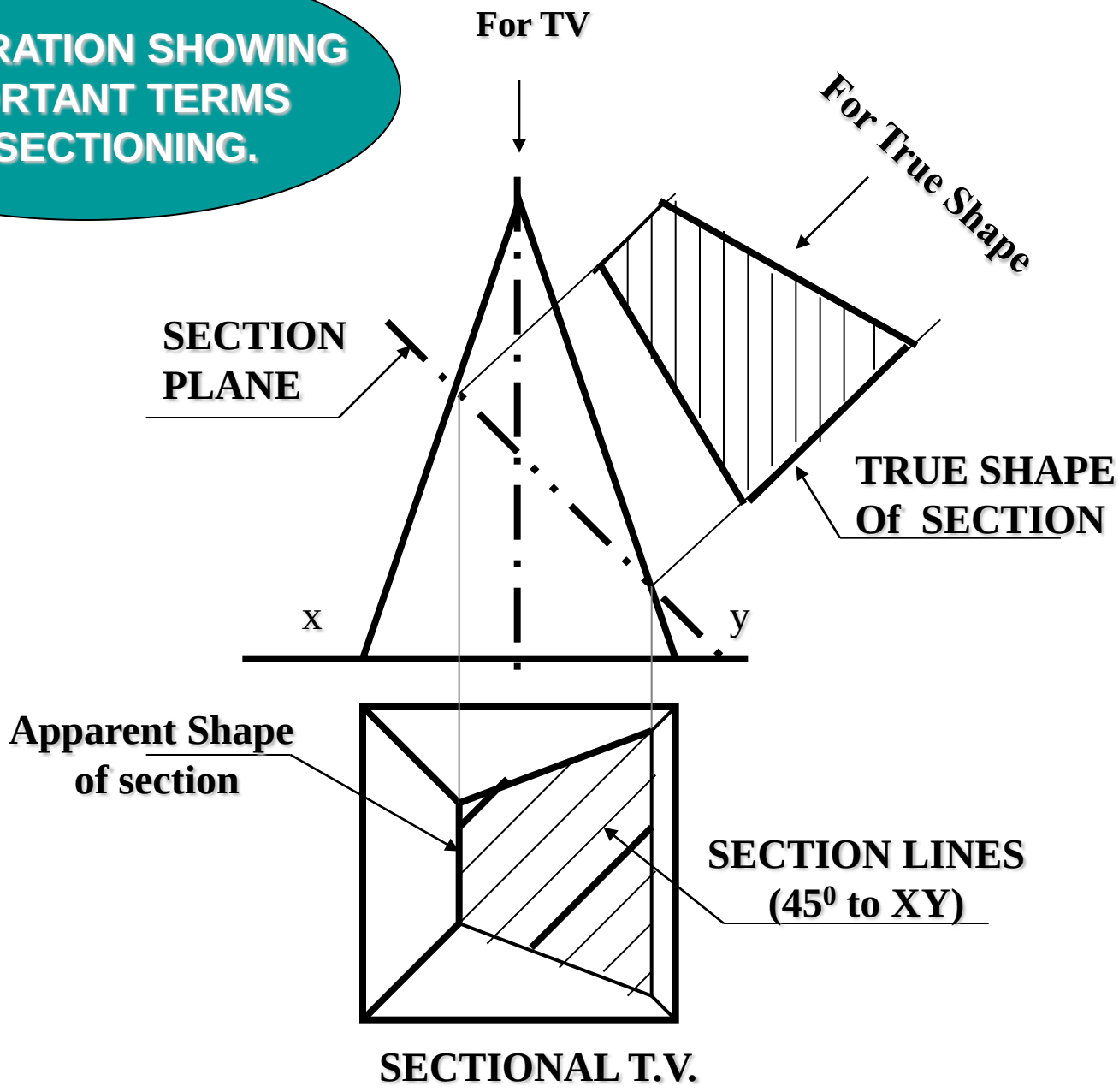
B) Section Plane perpendicular to Hp and inclined to Vp.
(This is a definition of an Aux. Vertical Plane i.e. A.V.P.)
NOTE:- This section plane appears as a straight line in TV.



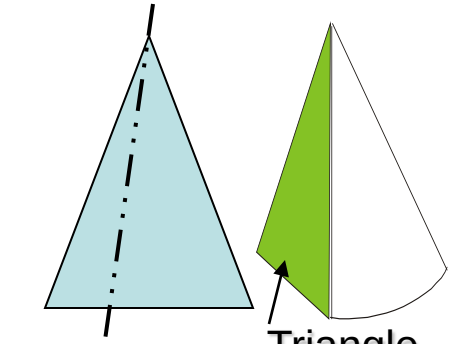
Remember:-

1. **After launching a section plane either in FV or TV, the part towards observer is assumed to be removed.**
2. **As far as possible the smaller part is assumed to be removed.**

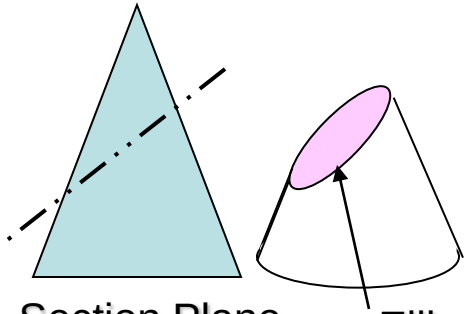
ILLUSTRATION SHOWING IMPORTANT TERMS IN SECTIONING.



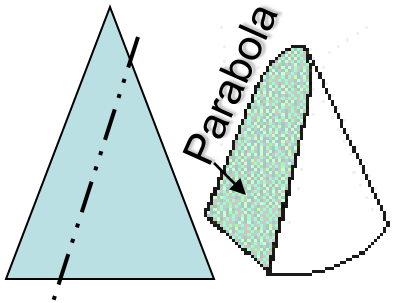
Typical Section Planes & Typical Shapes Of Sections.



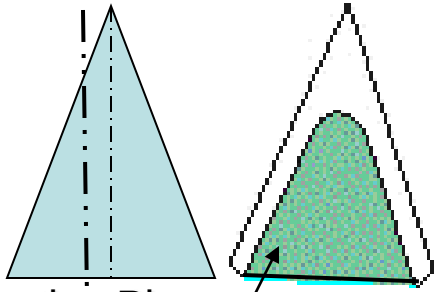
Section Plane Through Apex



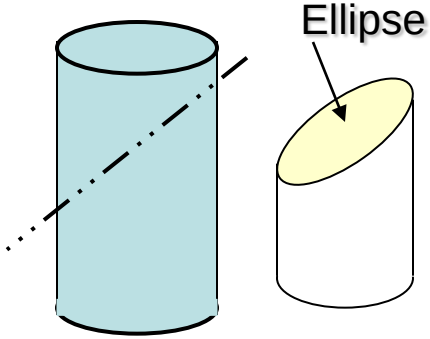
Section Plane Through Generators



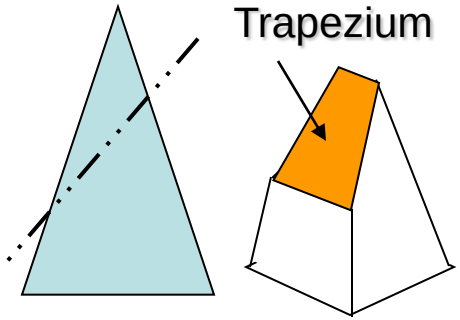
Section Plane Parallel to end generator.



Section Plane Parallel to Axis.



Cylinder through generators.



Sq. Pyramid through all slant edges