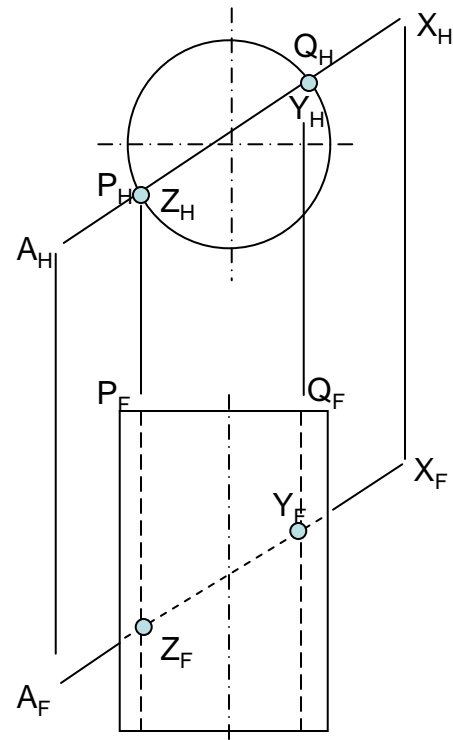


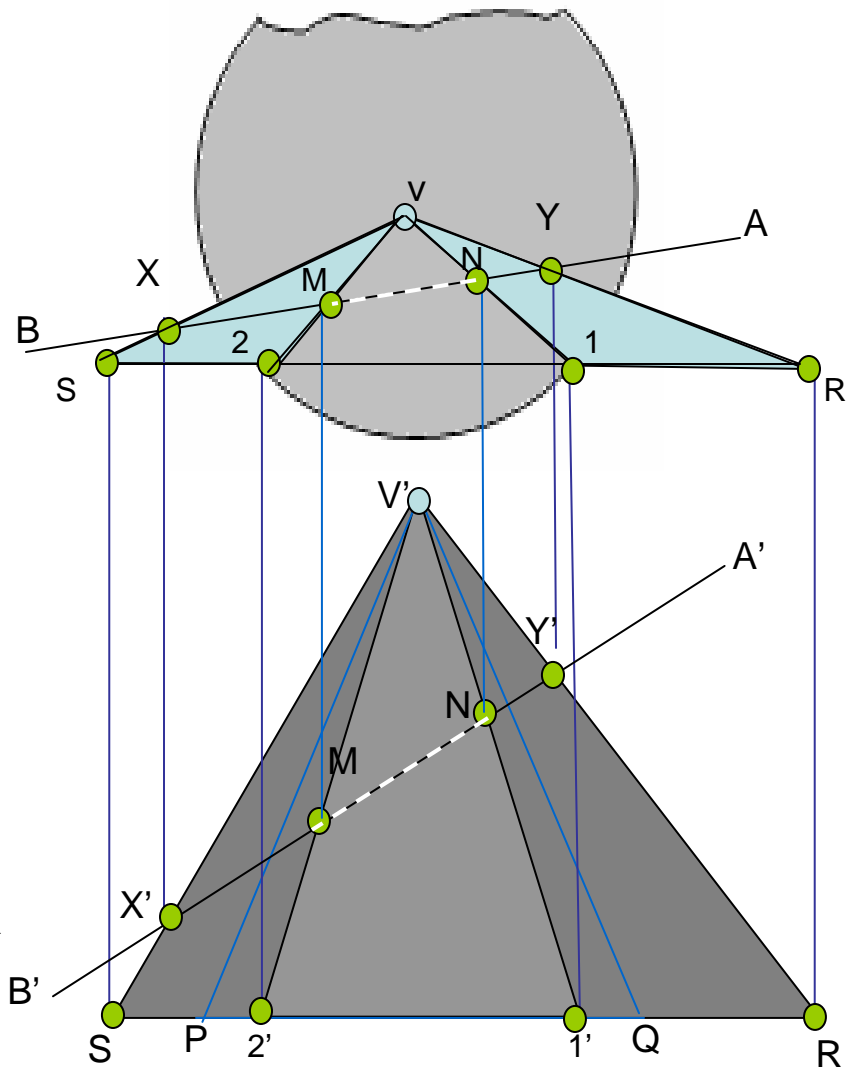
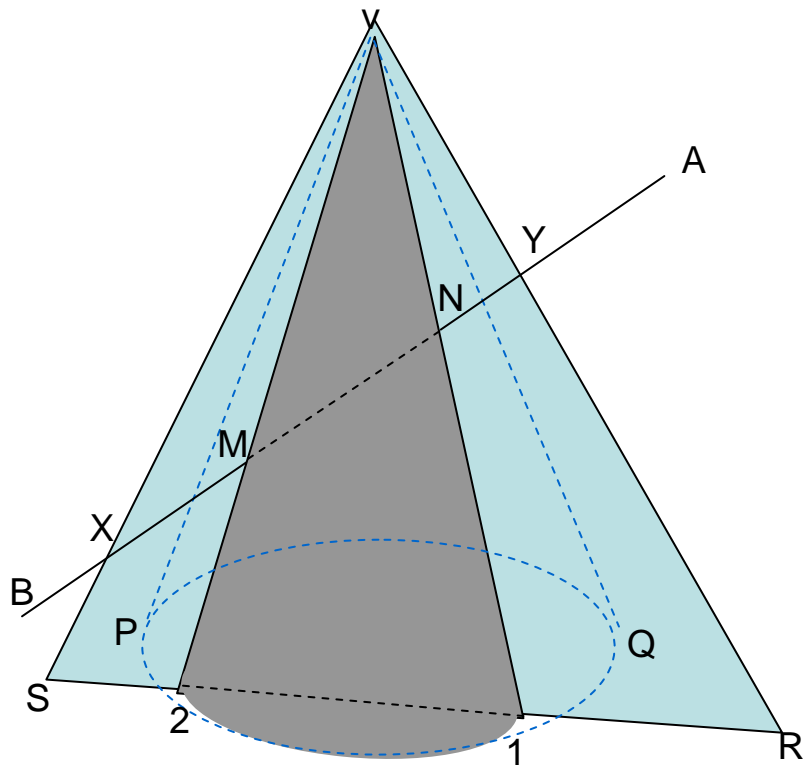
TA 101

Lecture – 23

<http://home.itk.ac.in/~mukesh/TA-101>

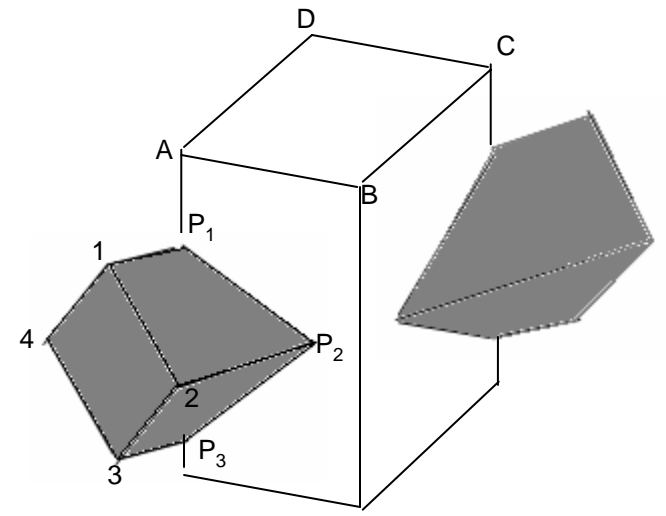
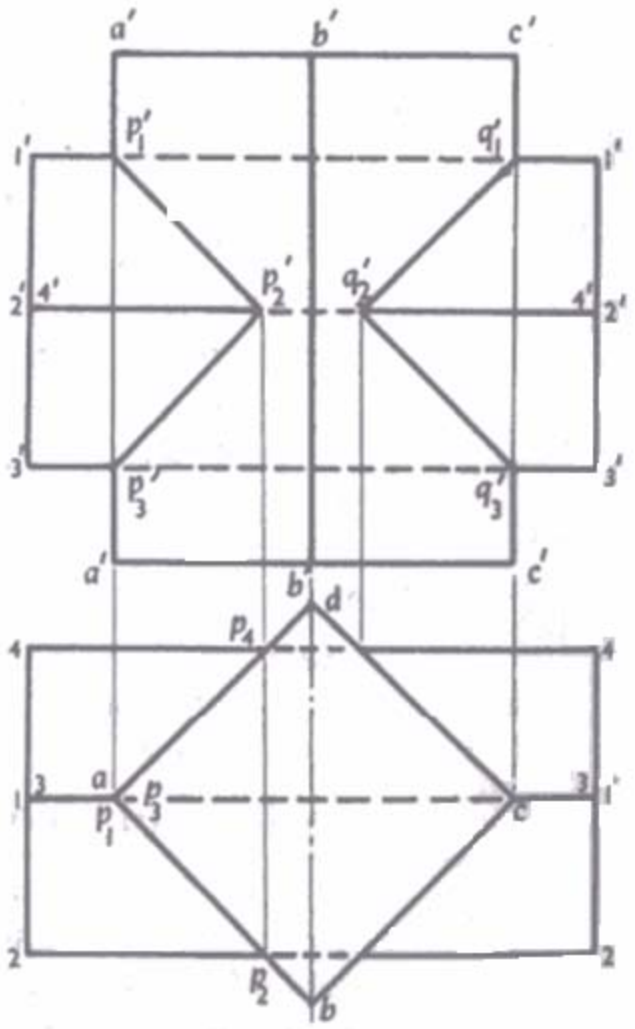


Intersection of Line and Cylinder – Simple Case



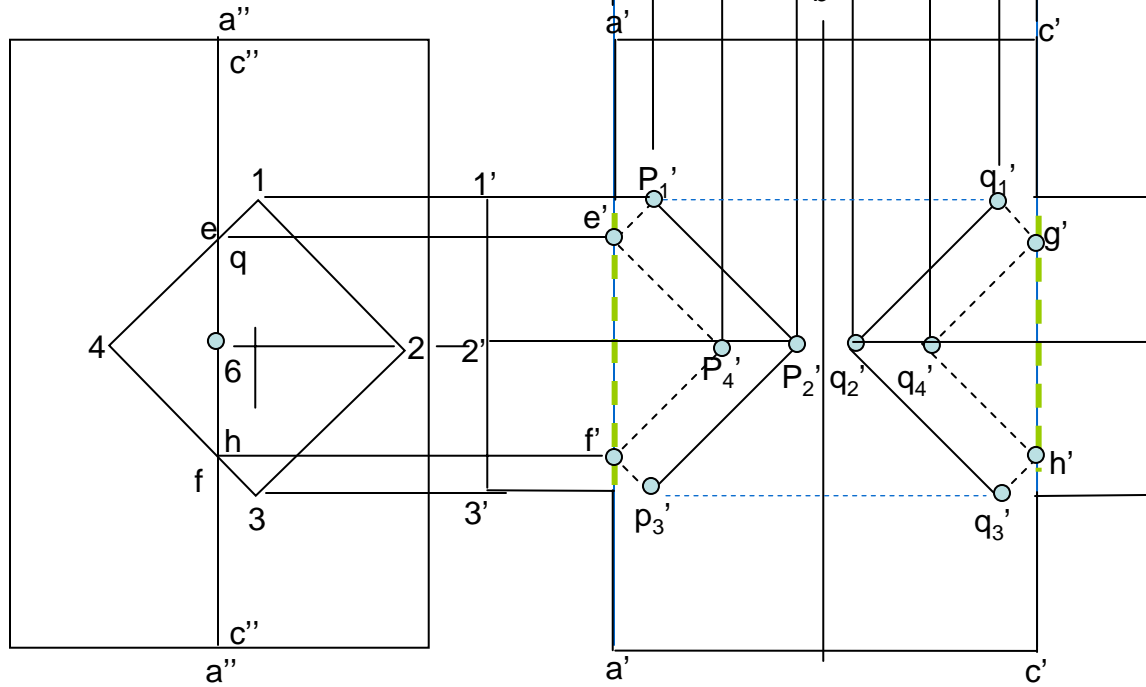
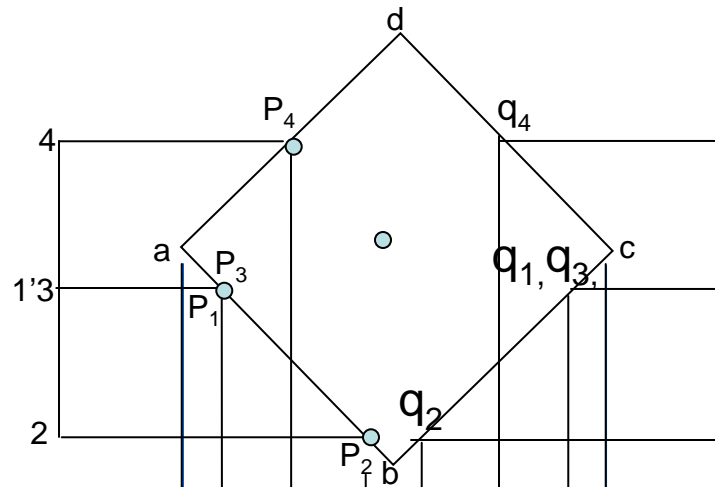
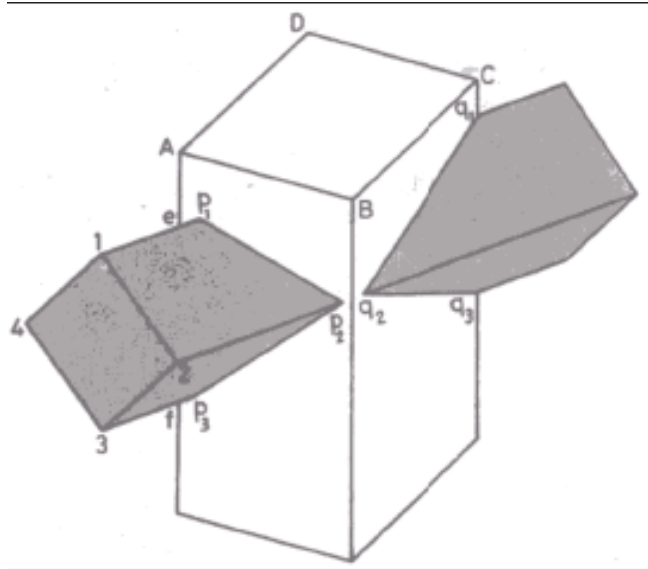
Intersection of Cone and Line

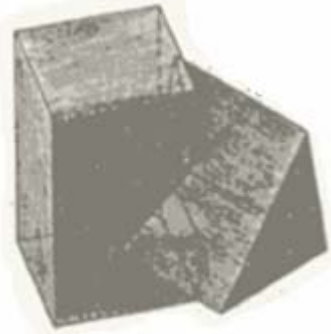
Pass a cutting plane (VXY) containing line (AB) and passing through apex (V)
 Sectioned part of cone (V12) is shown in grey colour
 Line AB as it pierces the cone is seen at points M and N
 See V,X,B,2,1,Y,A,M,N,R,S are all in one plane



**Intersection of solids – What is intersection what?
Better take projections in first angle**

**Concept – moment you see a plane in EV and a line
Hitting it – you get point of intersection (in that view)**



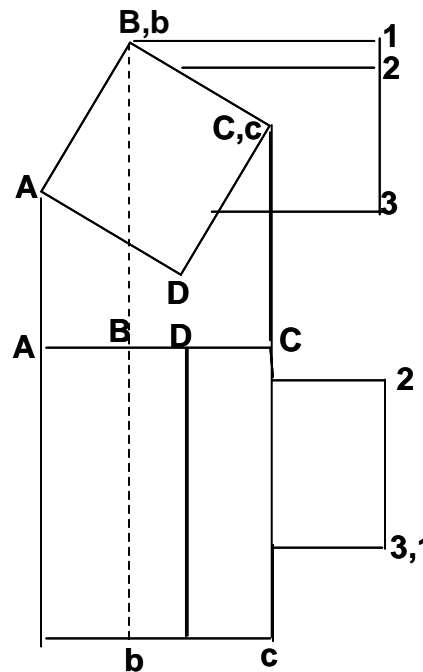


Object

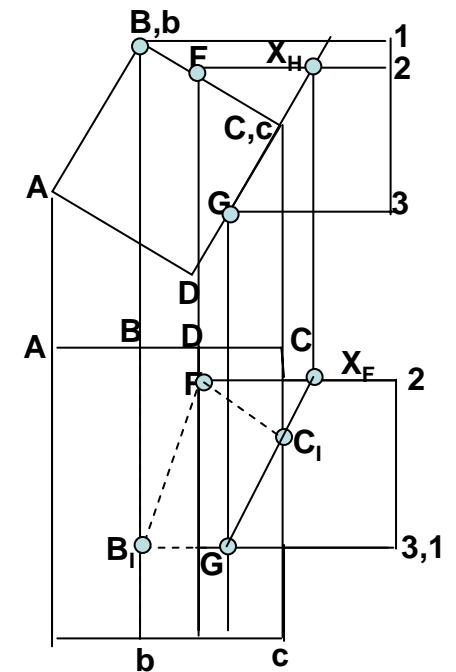
Visualize the object and its projections.
 Observe BC, CD are EVs in top views (TV) and yield point of intersections with line 2 and 3 as points F, G in TV.
 B in TV is also point of intersection as line Bb is hit by line 1.
 Transferring points of intersection (B,F,G) is straight Forward in FV.

There will be a point of intersection from line Cc and Plane 2-3. Catch is, plane 2-3 is not seen in EV so how To get this point.

Take X_H in TV on line 2 so that GC & X are in one line – observe, line GX is on plane 2-3. Project the line GX in FV. Wherever GX and Cc meet in FV is the required point Of intersection (i.e. C_I). Join lines of intersections in the order and show visibility



Projection



Solution

