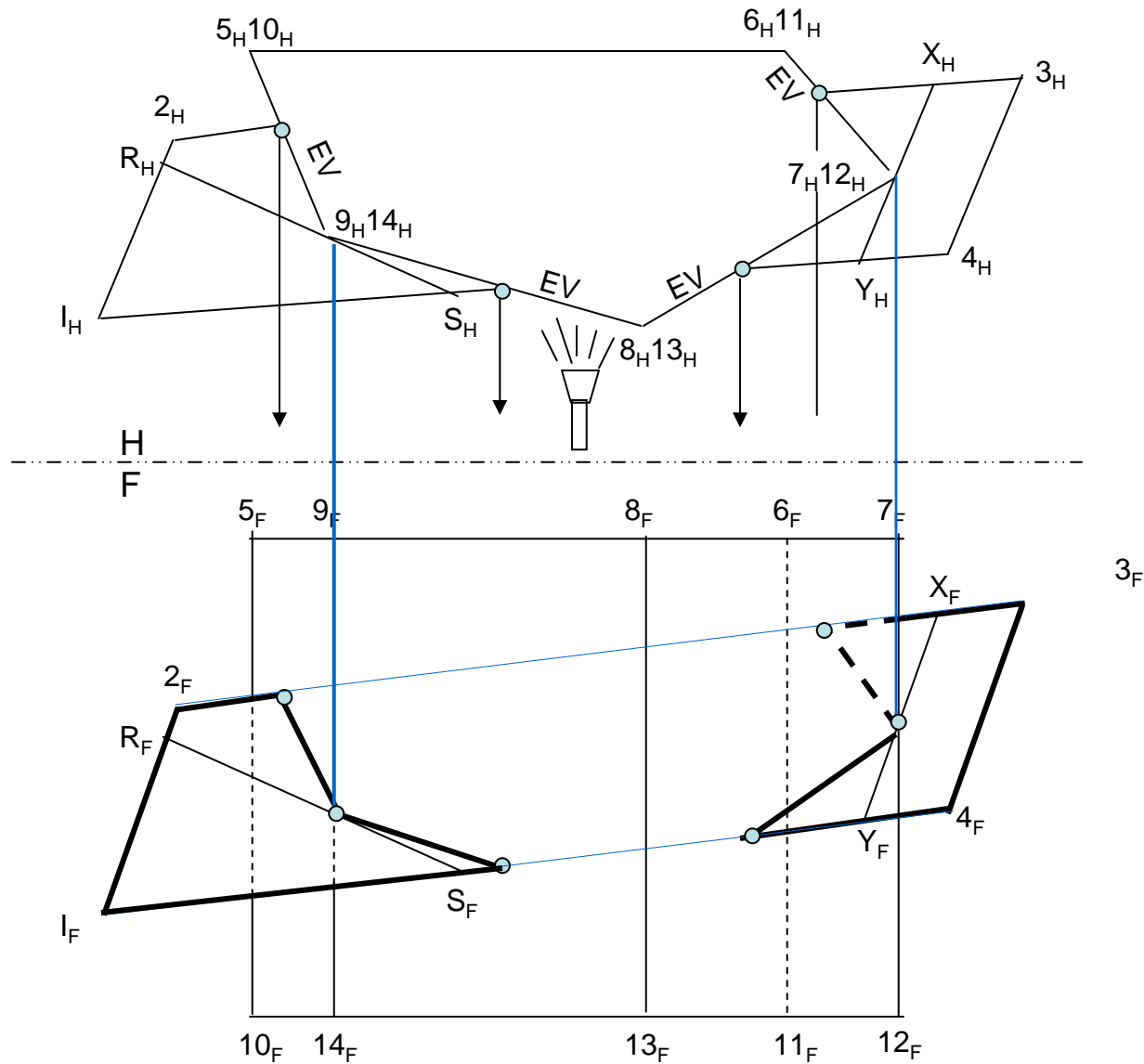


# TA 101

Lecture -22

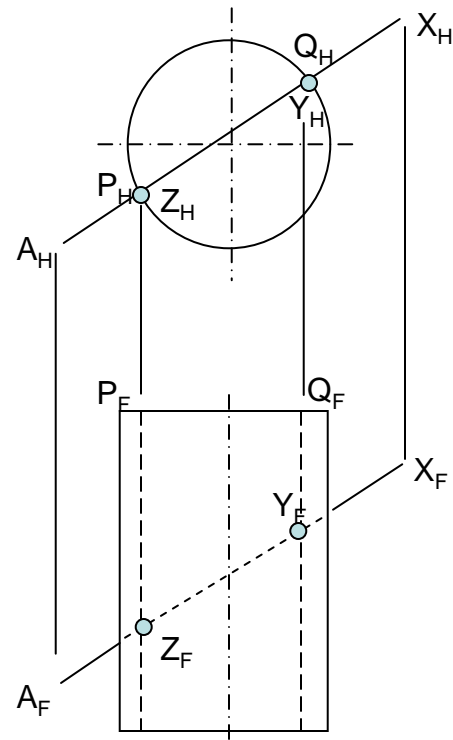
<http://home.iitk.ac.in/~mukesh/>

Intersections of Lines, Planes and Solids

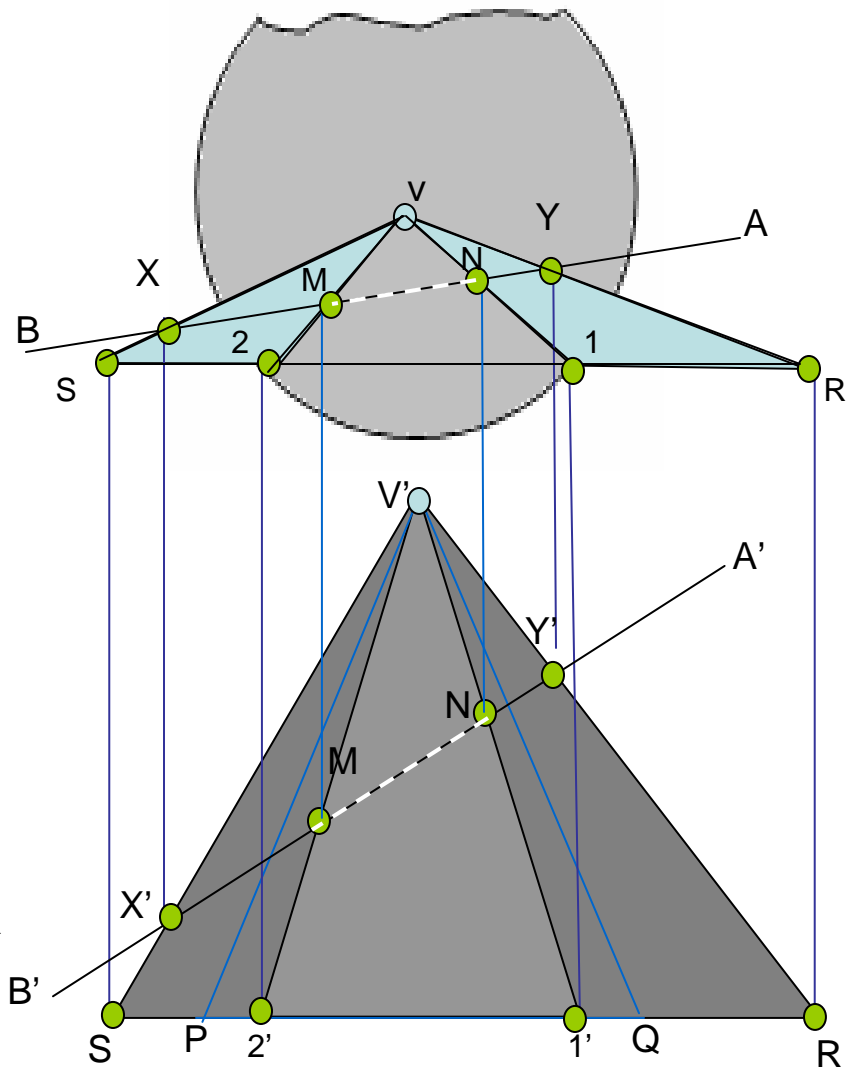
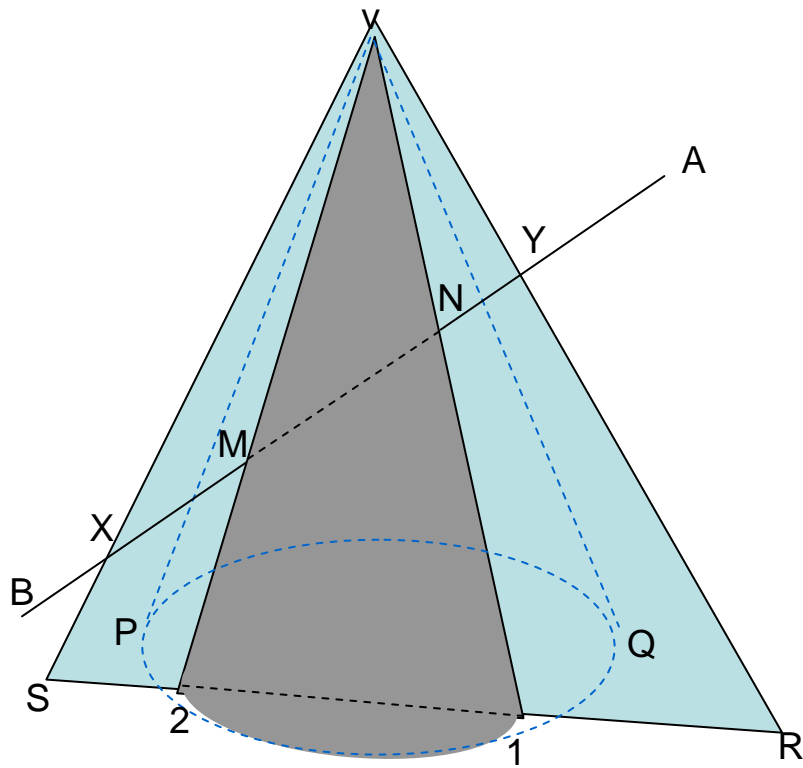


## Intersection of Prism and Plane

Expected number of intersection points = 6  
 When an EV exists and a line hits it, intersection point is immediately available  
 See the top view and immediately locate 4 intersection points  
 Draw line R-S through point 9-14 in top view – line R-S is on plane 1,2,3,4  
 Look for point of intersection between line R-S and line 9-14

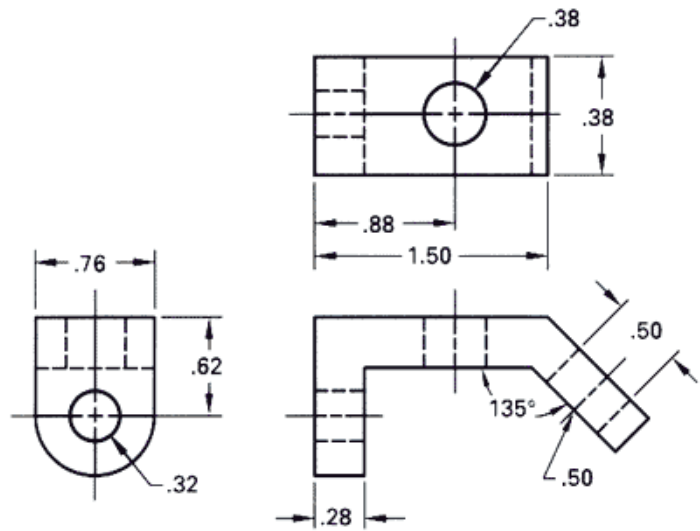


Intersection of Line and Cylinder – Simple Case

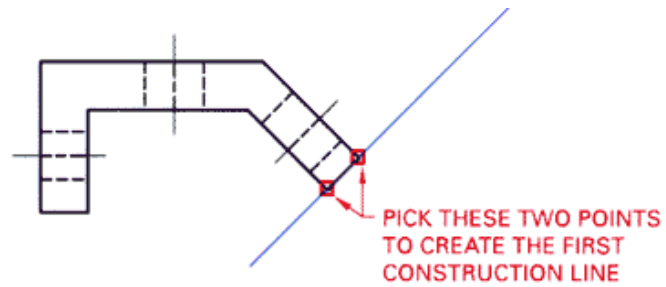


**Intersection of Cone and Line**

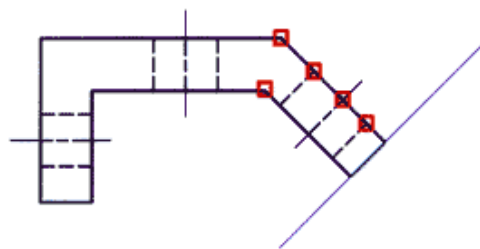
Pass a cutting plane (VXY) containing line (AB) and passing through apex (V)  
 Sectioned part of cone (V12) is shown in grey colour  
 Line AB as it pierces the cone is seen at point M and N  
 See V,X,B,2,1,Y,A,M,N,R,S are all in one plane



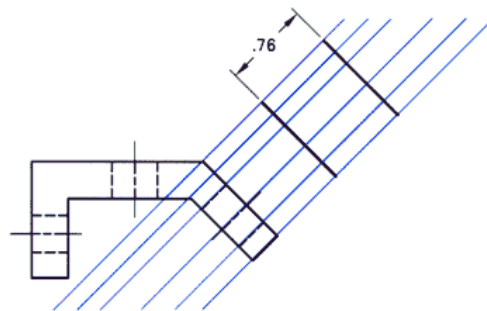
**A**



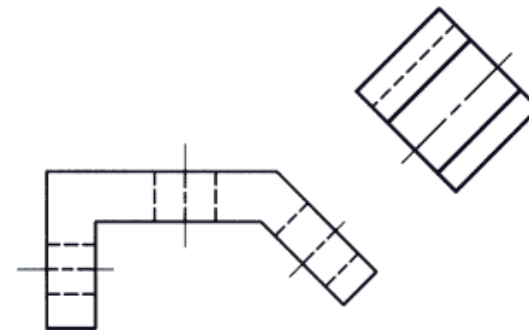
**B**



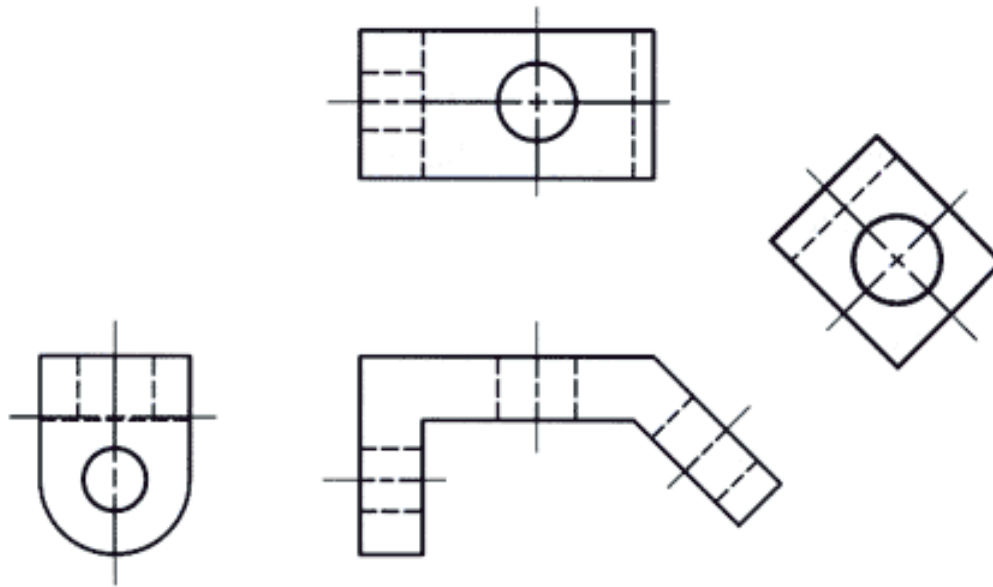
**C**



**D**



**E**



F

Final drawing for production/construction