TA 101A:2019-20:II

Lecture 21 –Space Geometry VII

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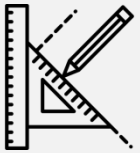
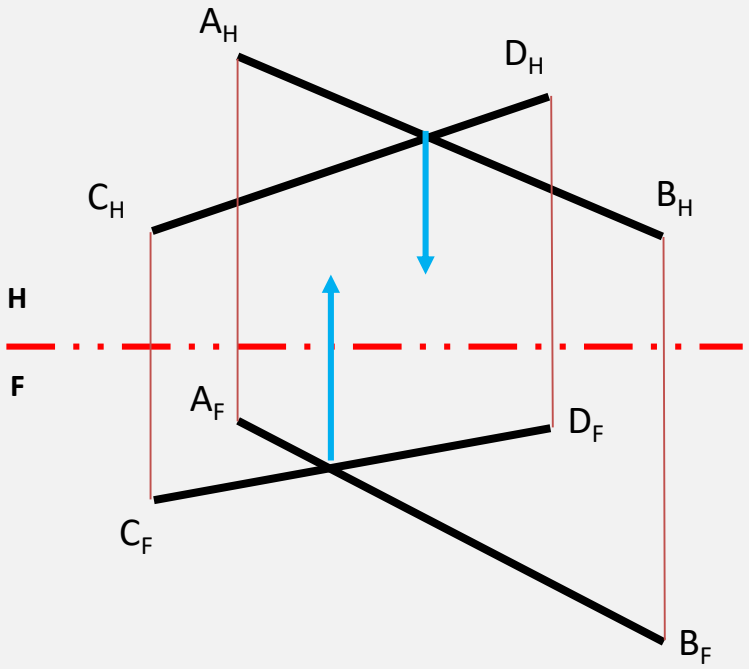
Recapitulation



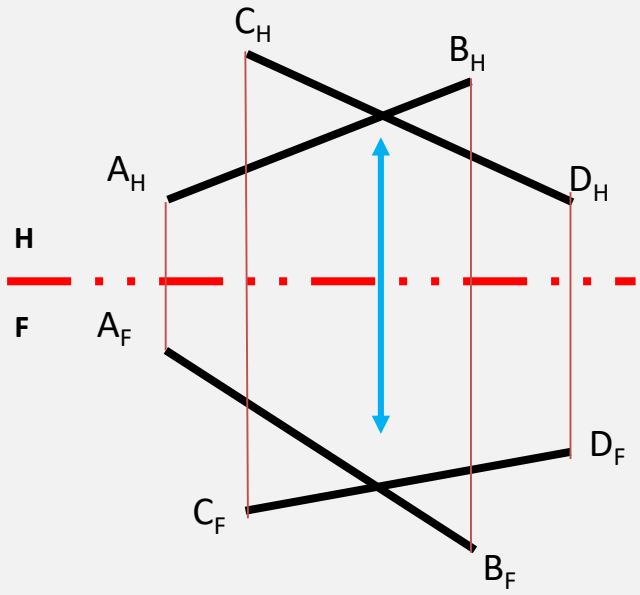
- Angle between planes
  - Edge views available
  - Line of intersection available as normal view
  - Line of intersection is an oblique line
- Shortest distance from a point to a line
  - Distance between the point and the point view of the line
- Shortest distance between two lines
  - Perpendicular from point view of a line on other line on a projection plane

Interaction of Lines and Planes

- **Test for Intersection of Lines**



Do lines intersect? NO

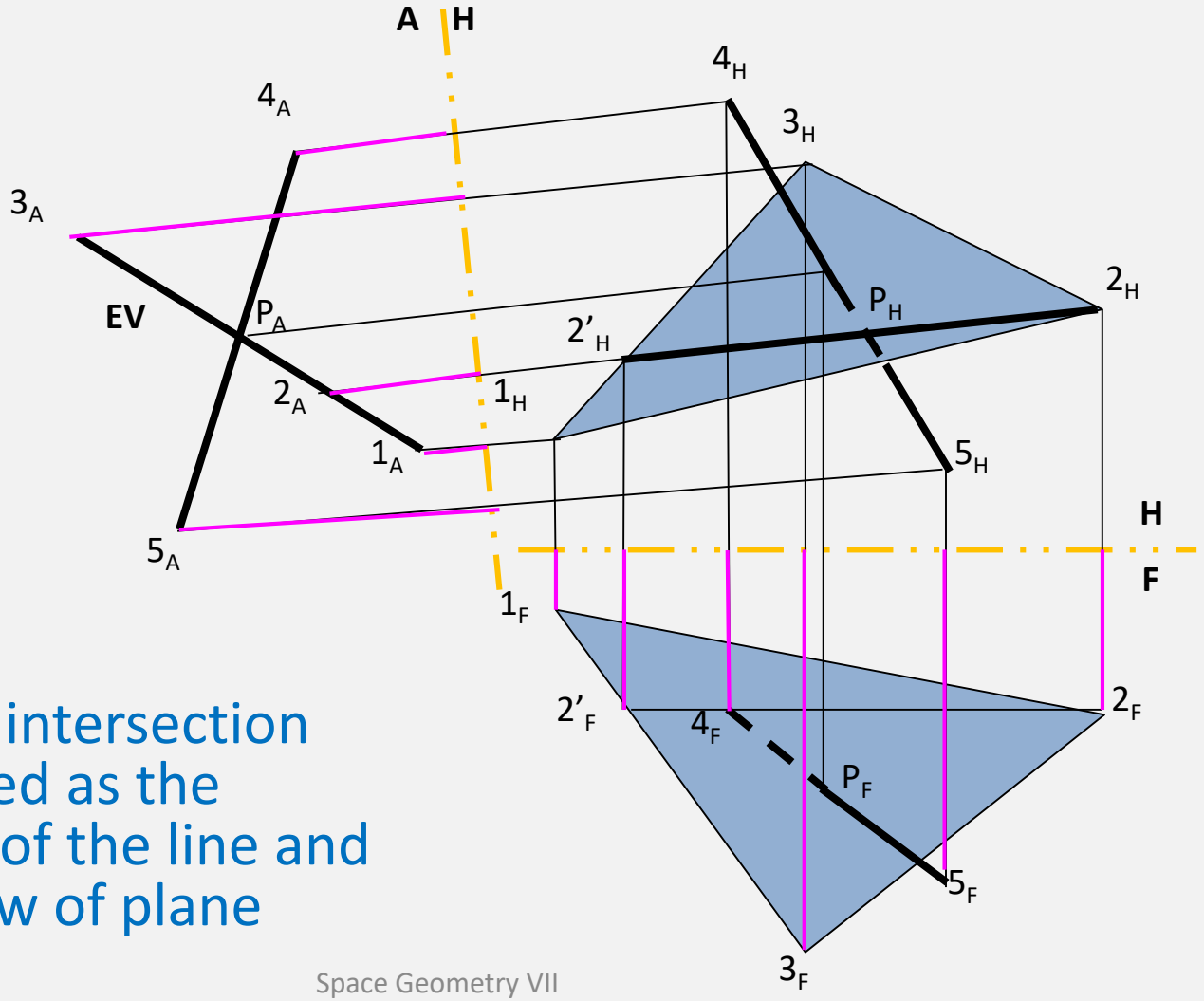


Do lines intersect? YES

The point of intersection of two lines must stay aligned in all views

Intersection of Lines and Planes

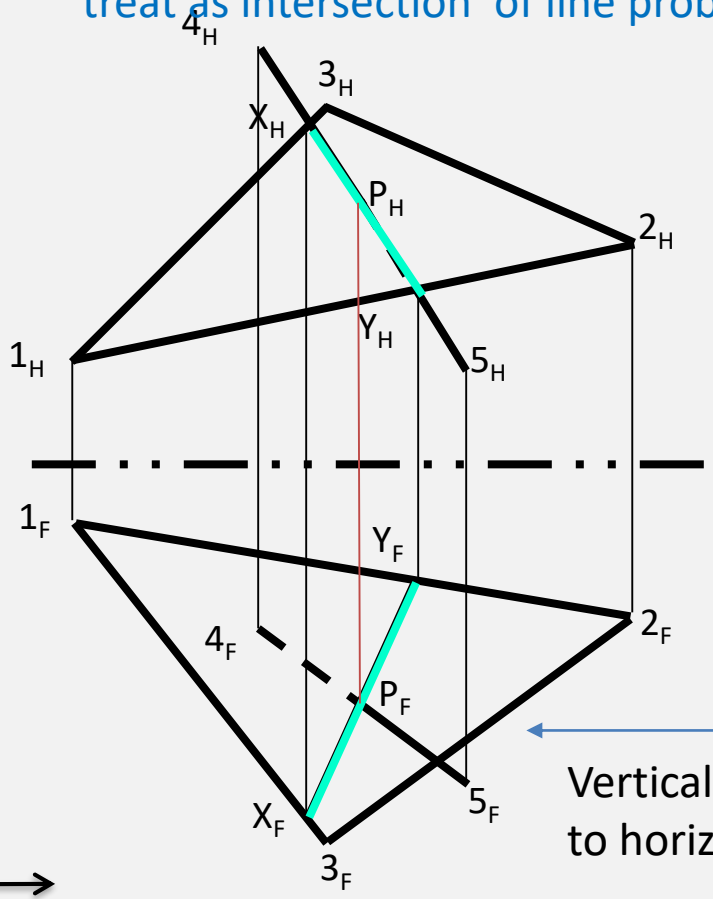
- Edge View Method



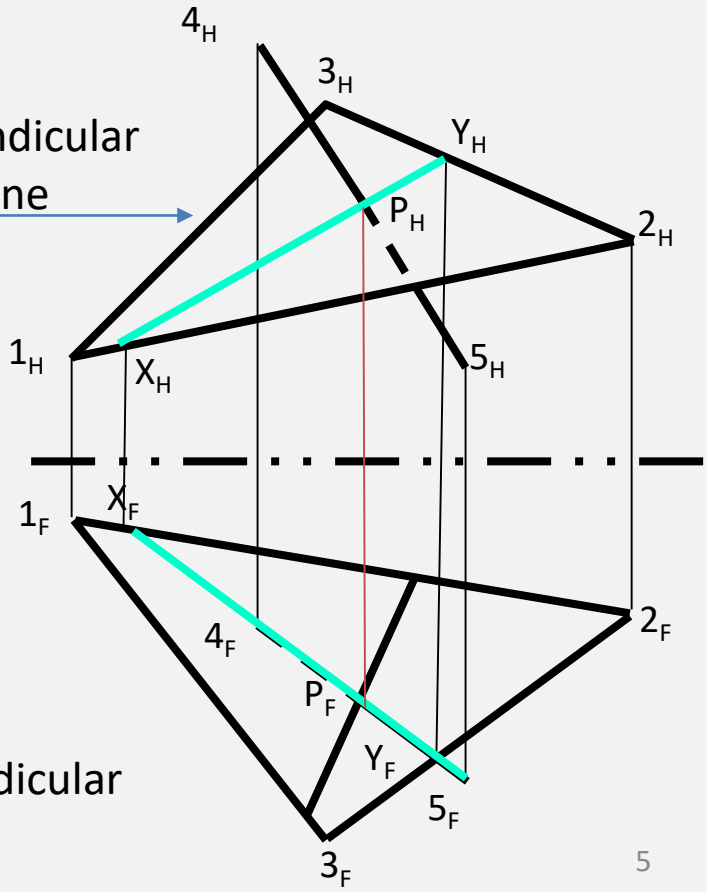
- The point of intersection can be located as the intersection of the line and the edge view of plane

Intersection of Lines and Planes

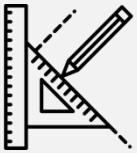
- Cutting Plane Method
  - Intersection point of given line and the line formed by intersection of a (vertical or horizontal) plane with edges of given plane will be aligned in H and F views. Now treat as intersection of line problem.



Plane perpendicular to frontal plane



Vertical plane or perpendicular to horizontal plane



Thank you !