

Lecture 17

SPACE GEOMETRY

:: INTRODUCTION




TA 101 : Engineering Graphics

2007-08 Semester II

January – May 2008

OUTLINE

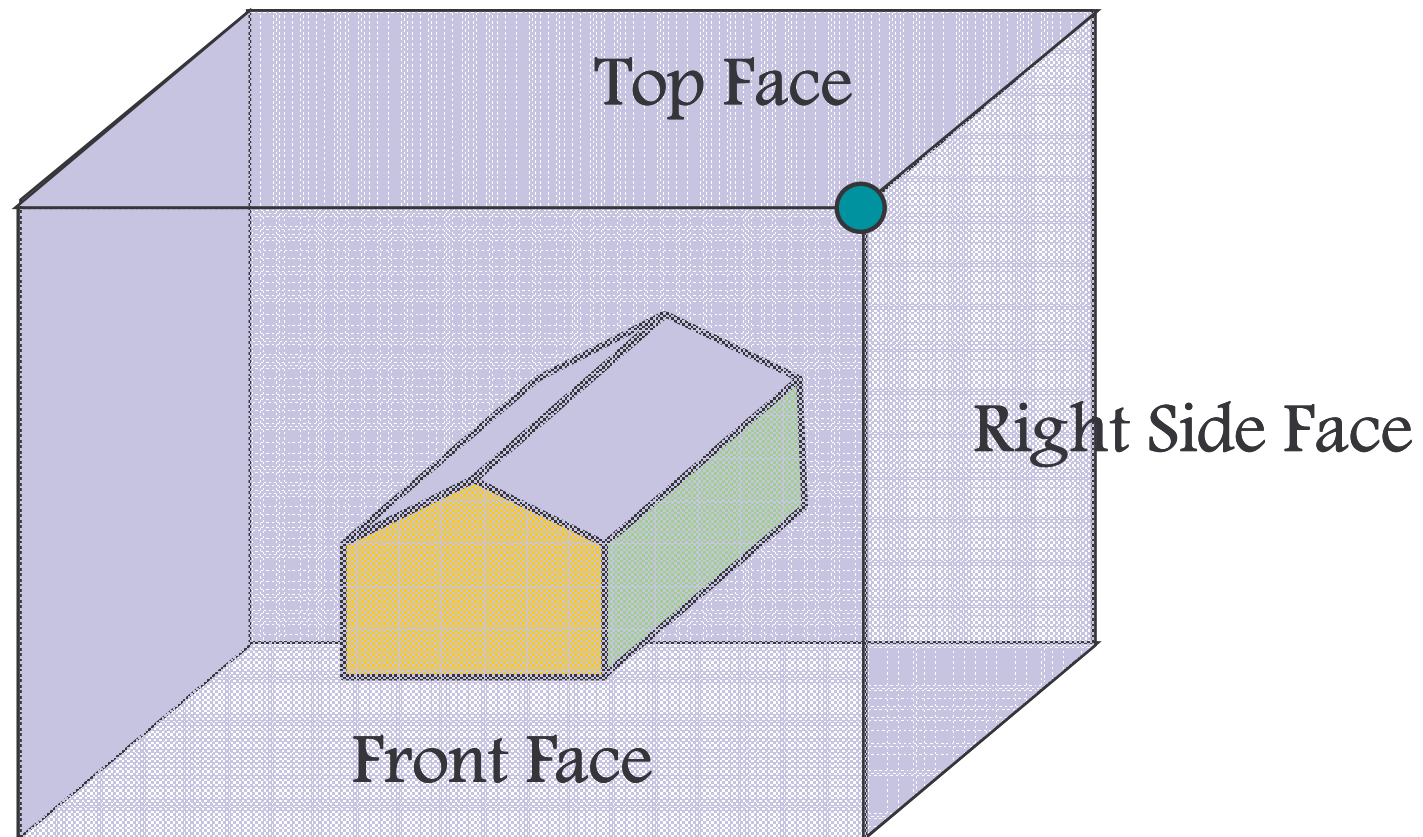
- A Point in Space
- A Line in Space
- A Plane in Space



A "POINT" IN SPACE

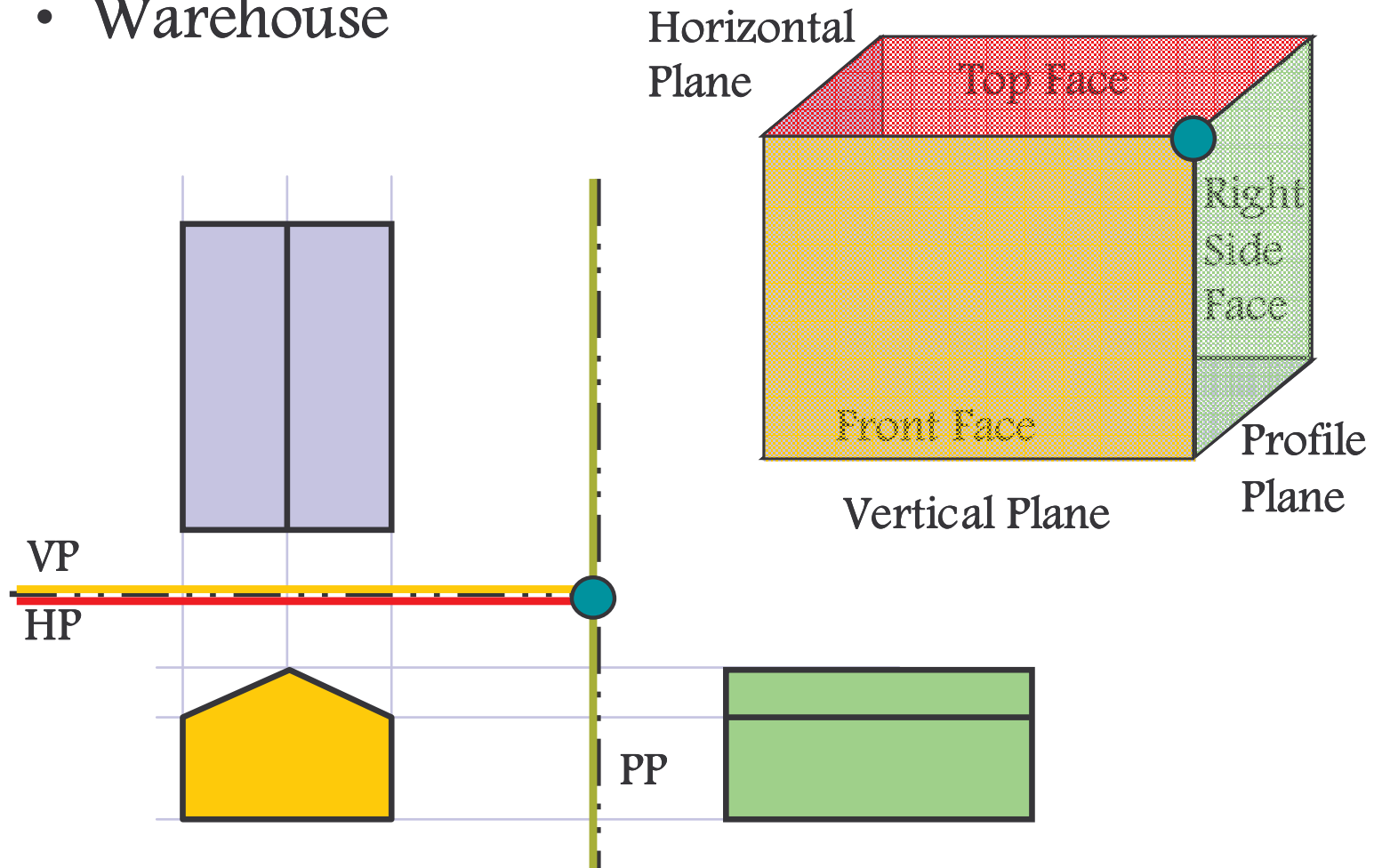
VIEWING BOX

- THIRD Angle Projection



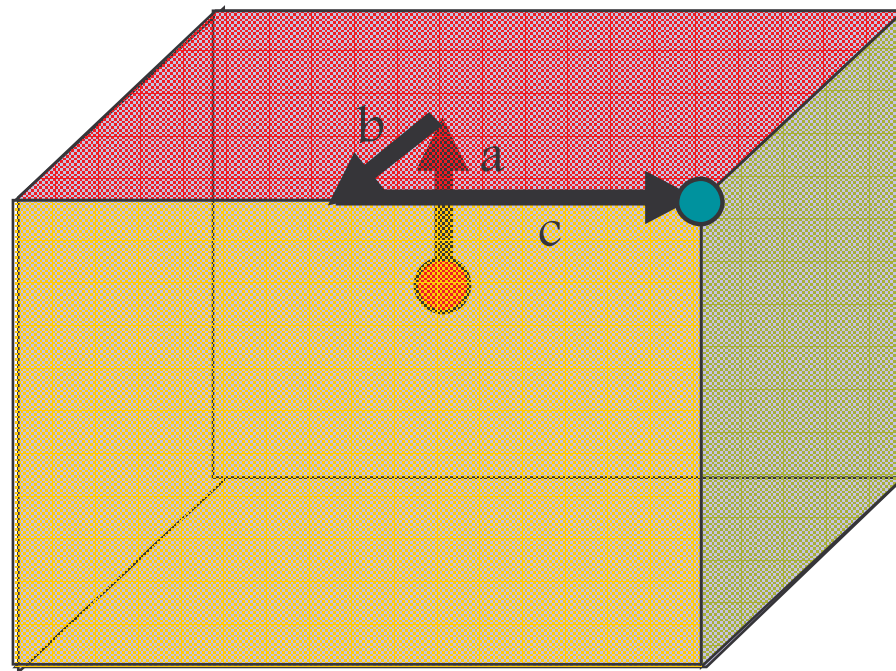
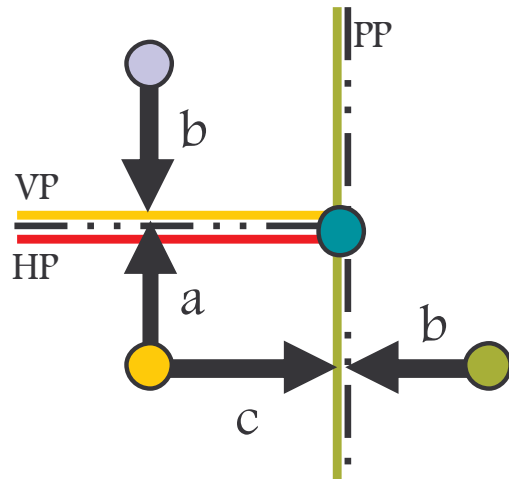
VIEWING BOX

- Warehouse



A POINT

- Define its position
 - with respect to Coordinate Axes
 - with respect to VP, HP & PP

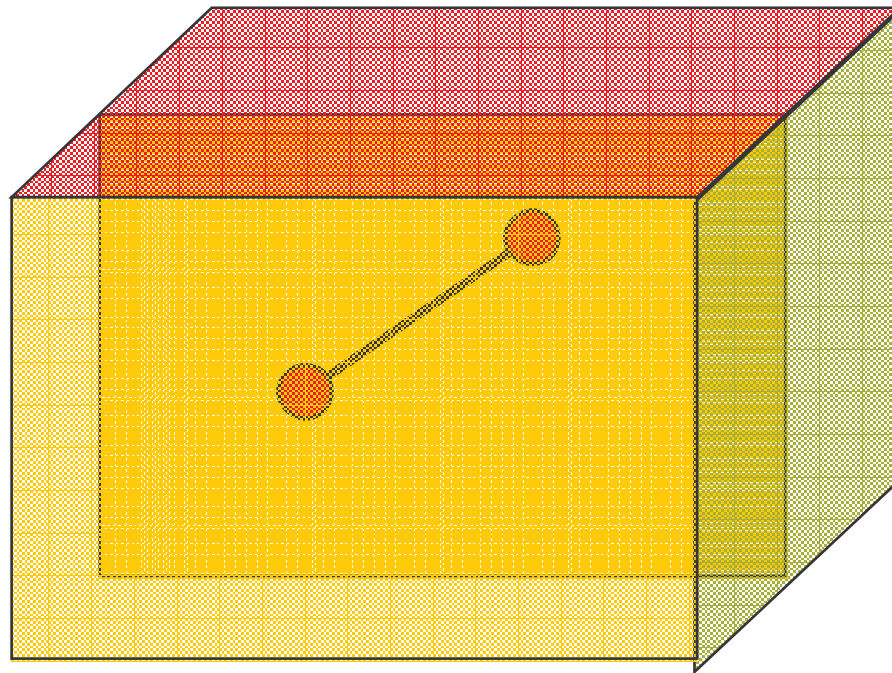
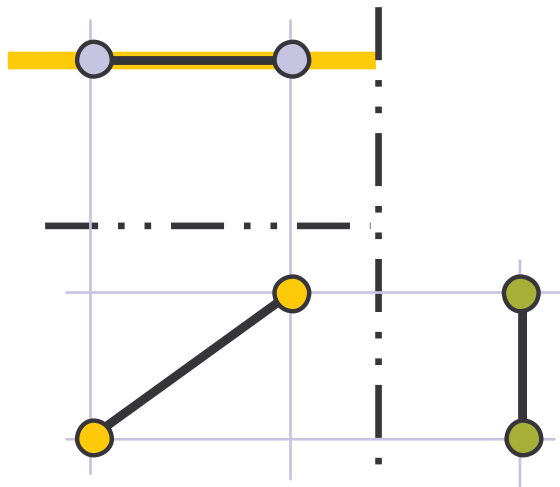




A "LINE" IN SPACE

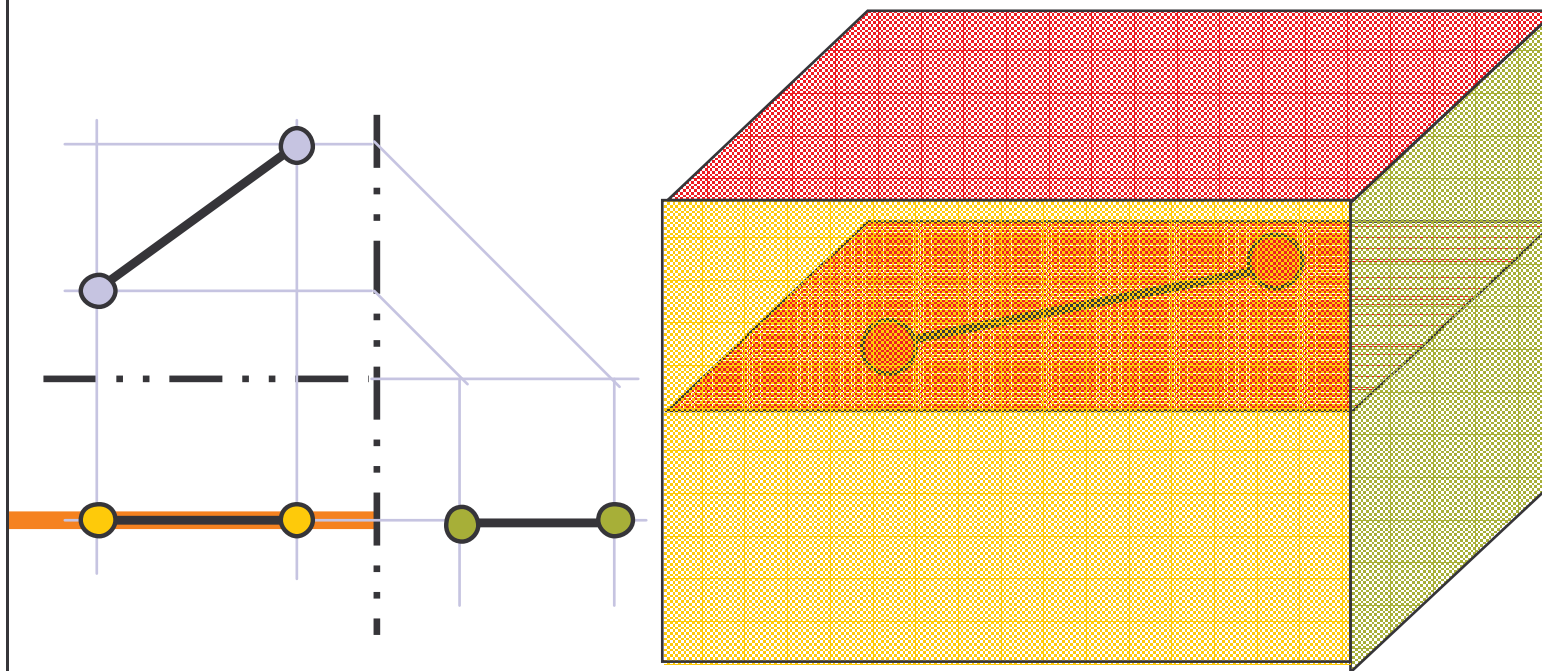
A LINE

- In a plane parallel to VP



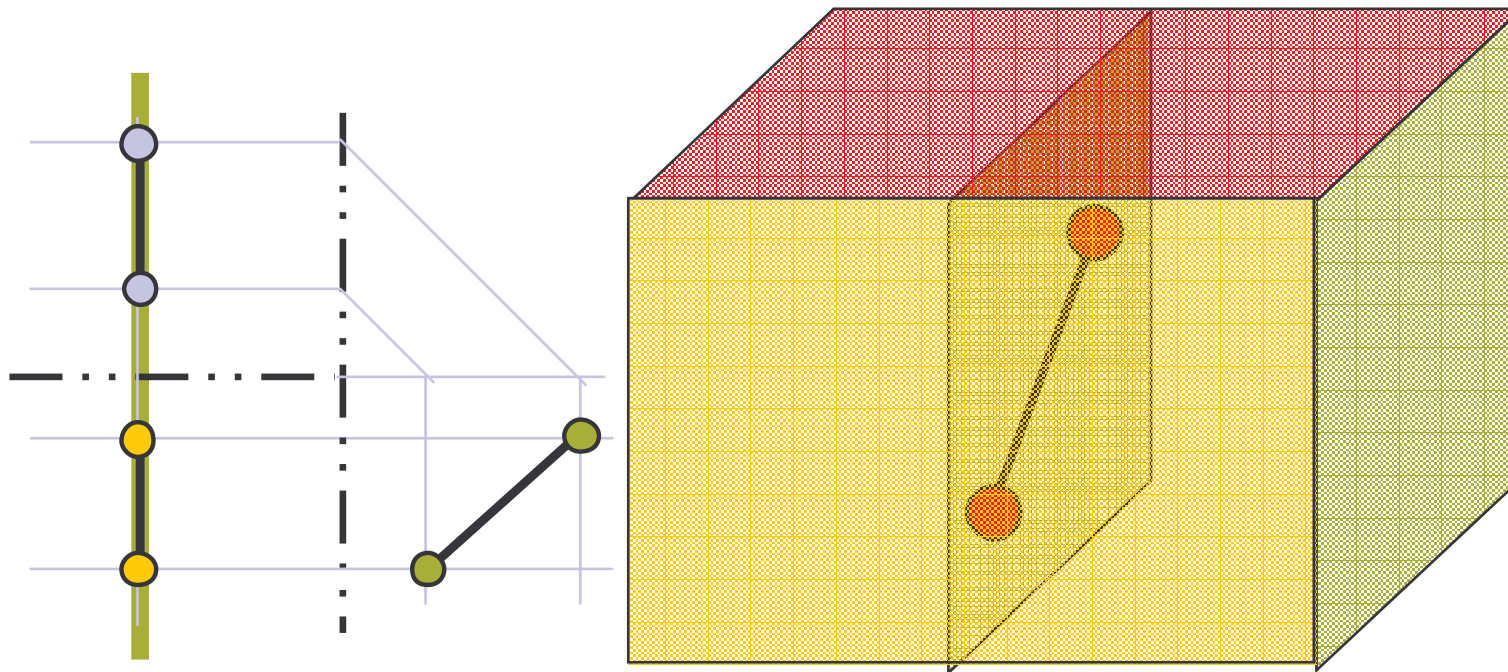
A LINE

- In a plane parallel to HP



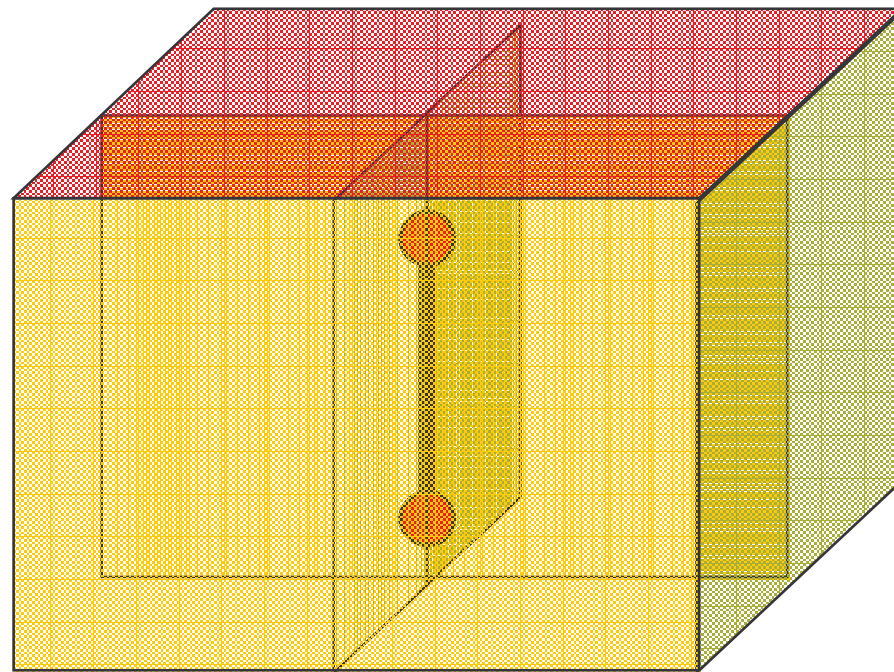
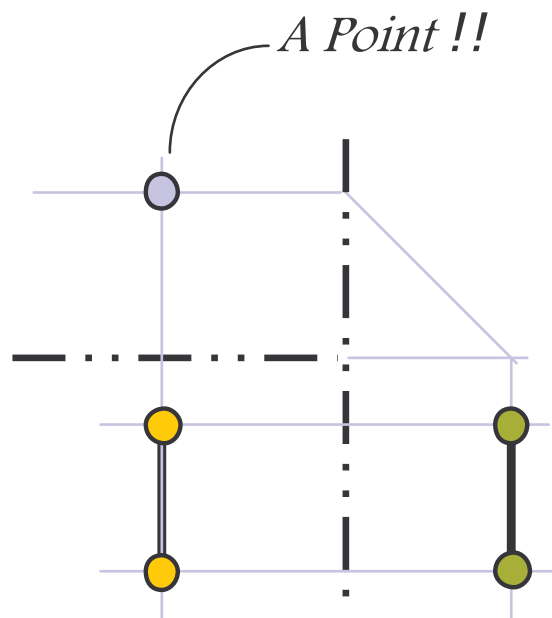
A LINE

- In a plane parallel to PP



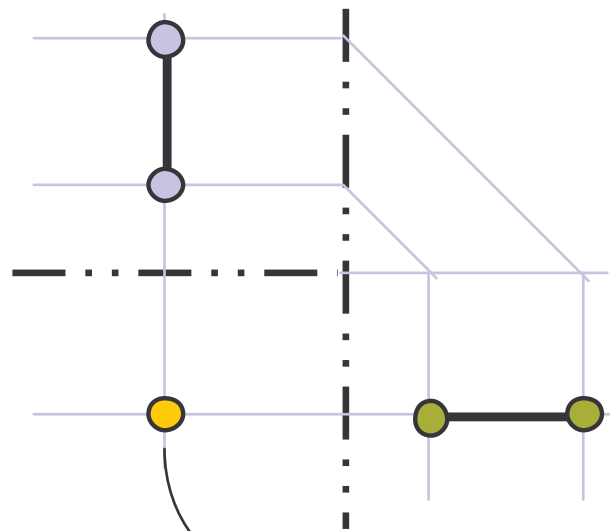
A LINE

- Perpendicular to HP

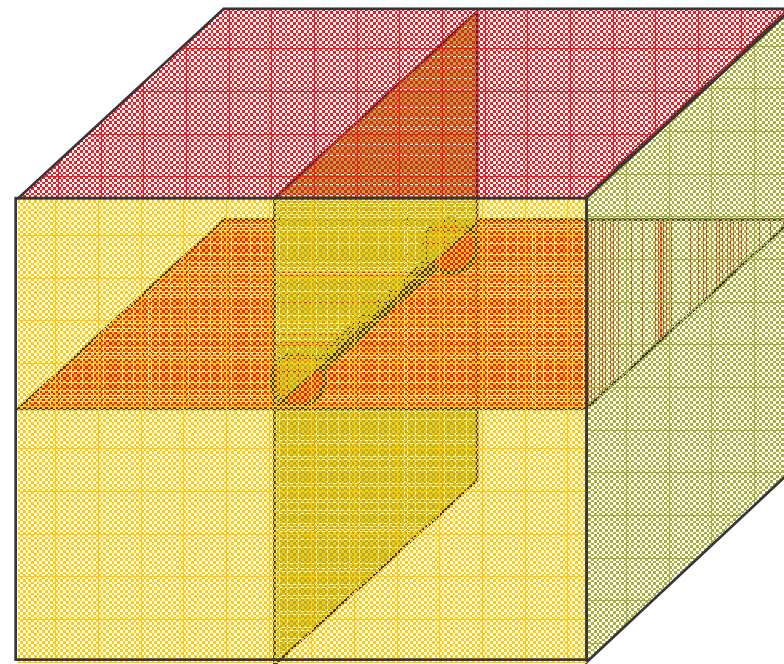


A LINE

- Perpendicular to VP

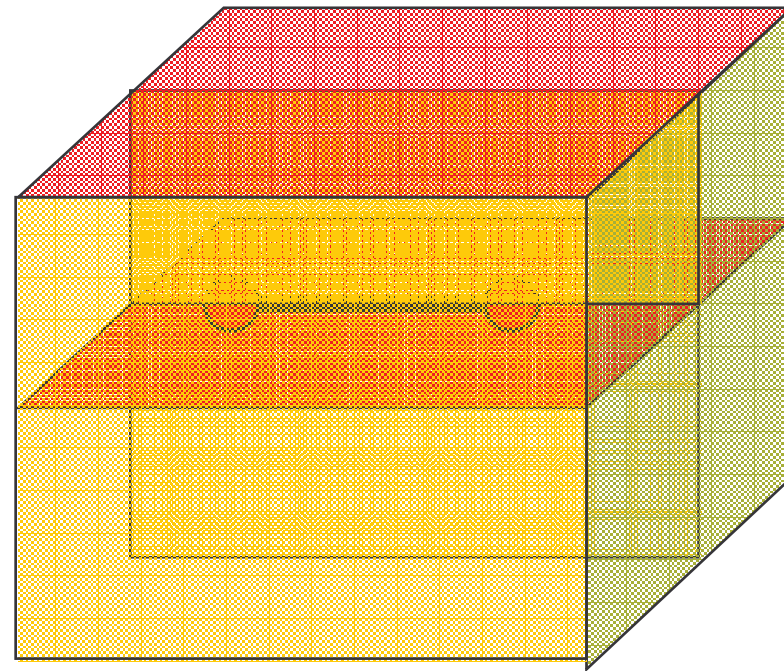
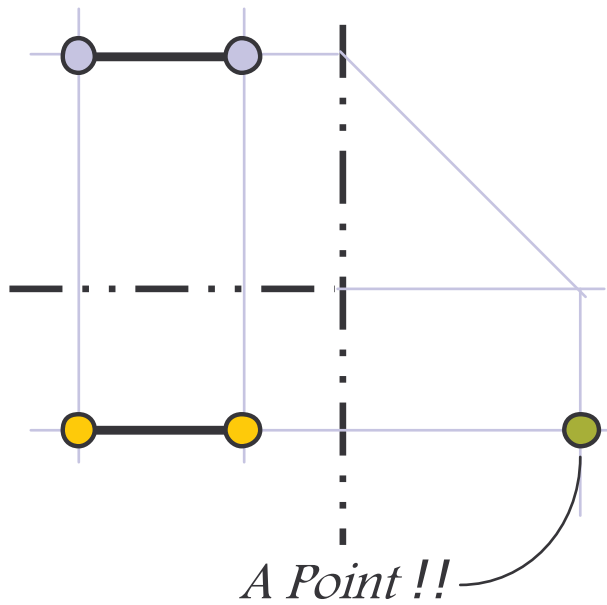


A Point !!



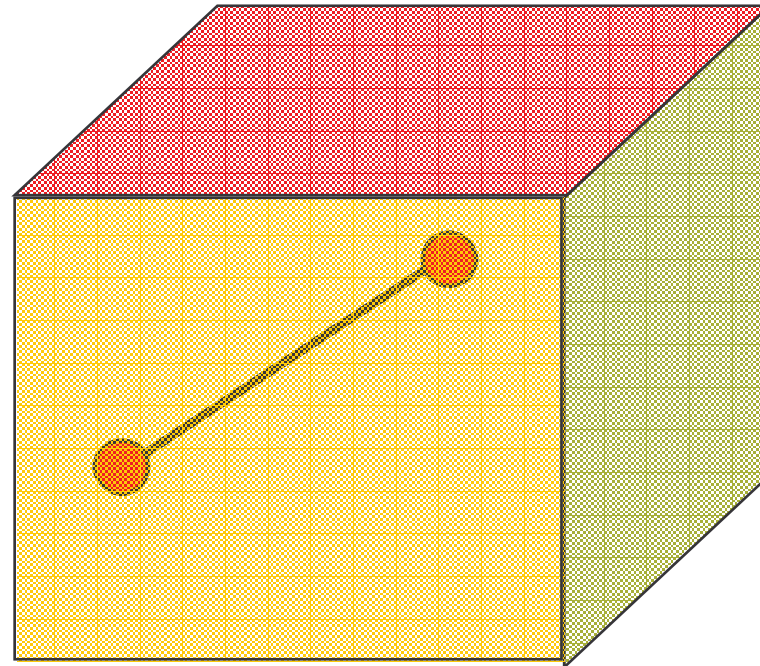
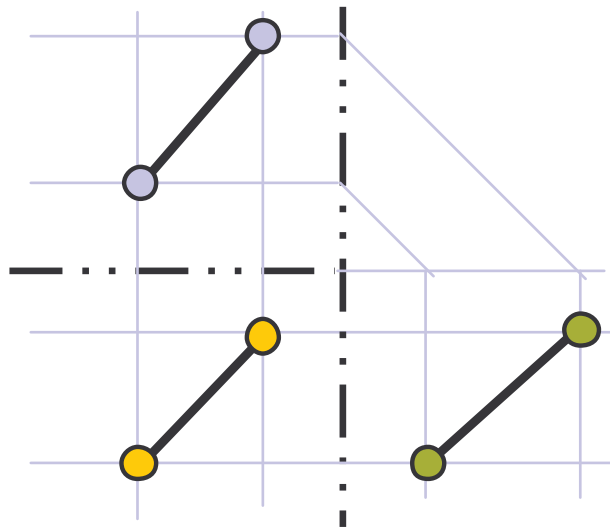
A LINE


- Perpendicular to PP



A LINE

- Arbitrarily oriented in space
 - How does one get its TRUE LENGTH ?

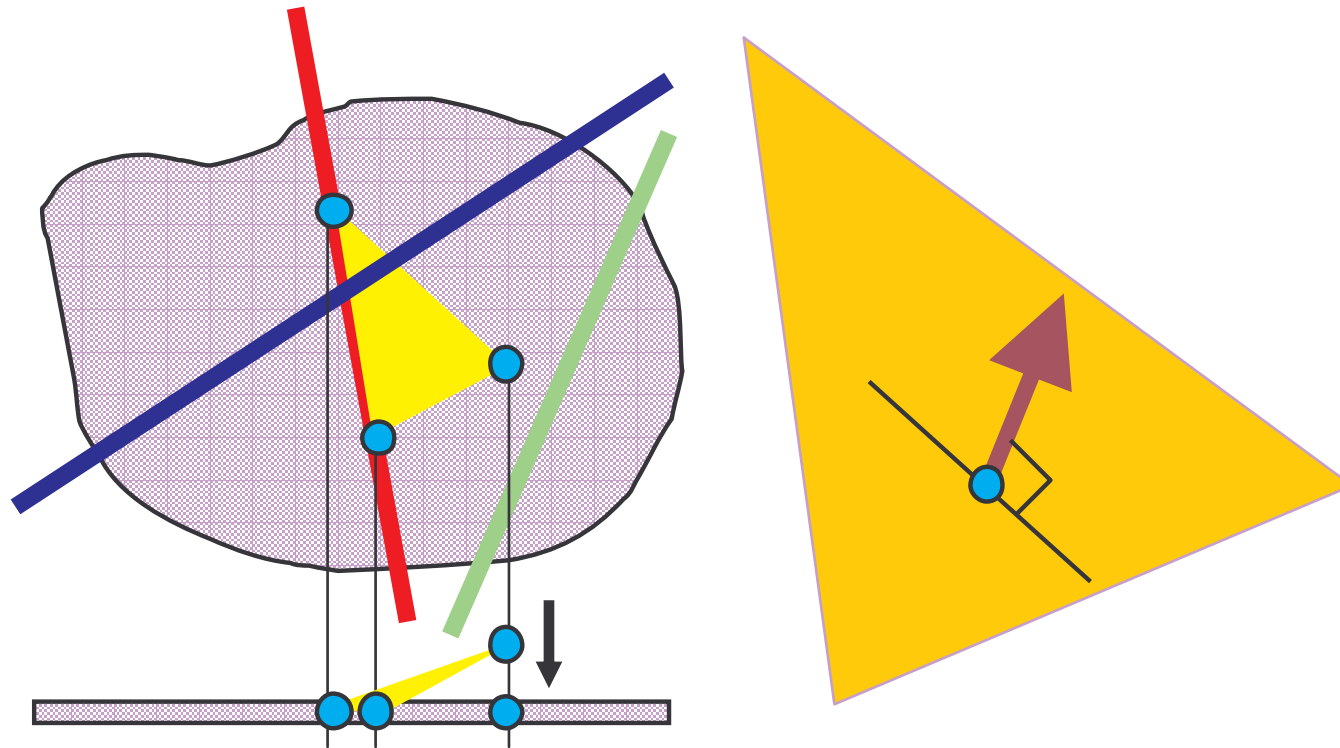




A "PLANE" IN SPACE

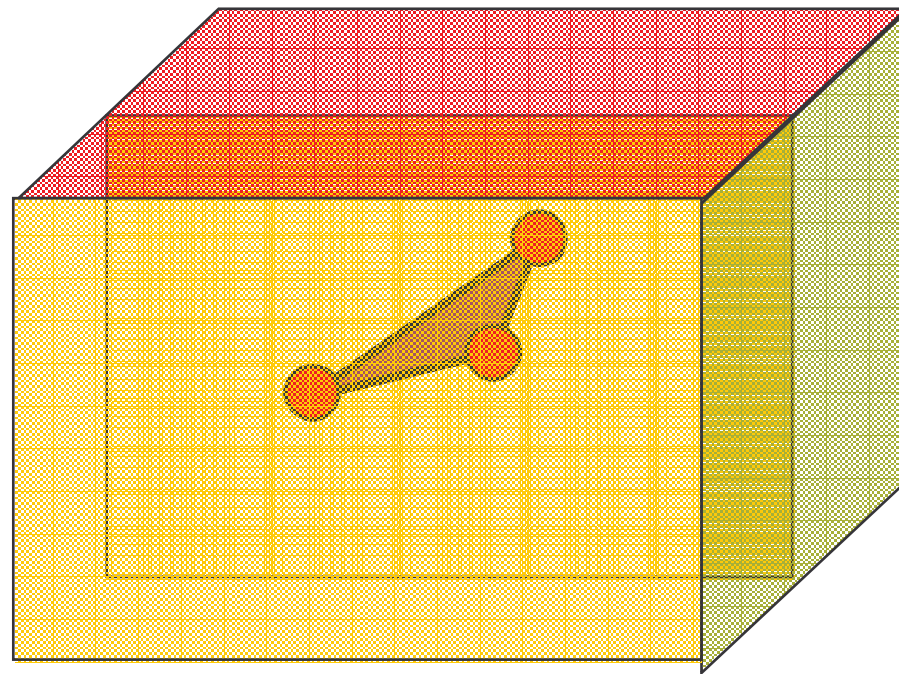
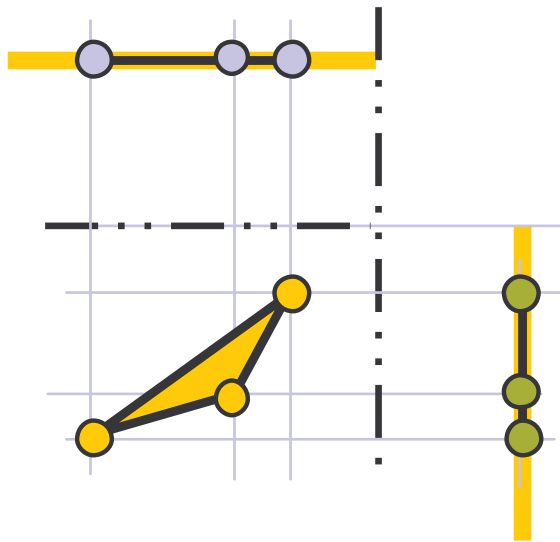
REPRESENTATION OF A PLANE

- Plane can be defined by **THREE** points
 - Characterised by its normal



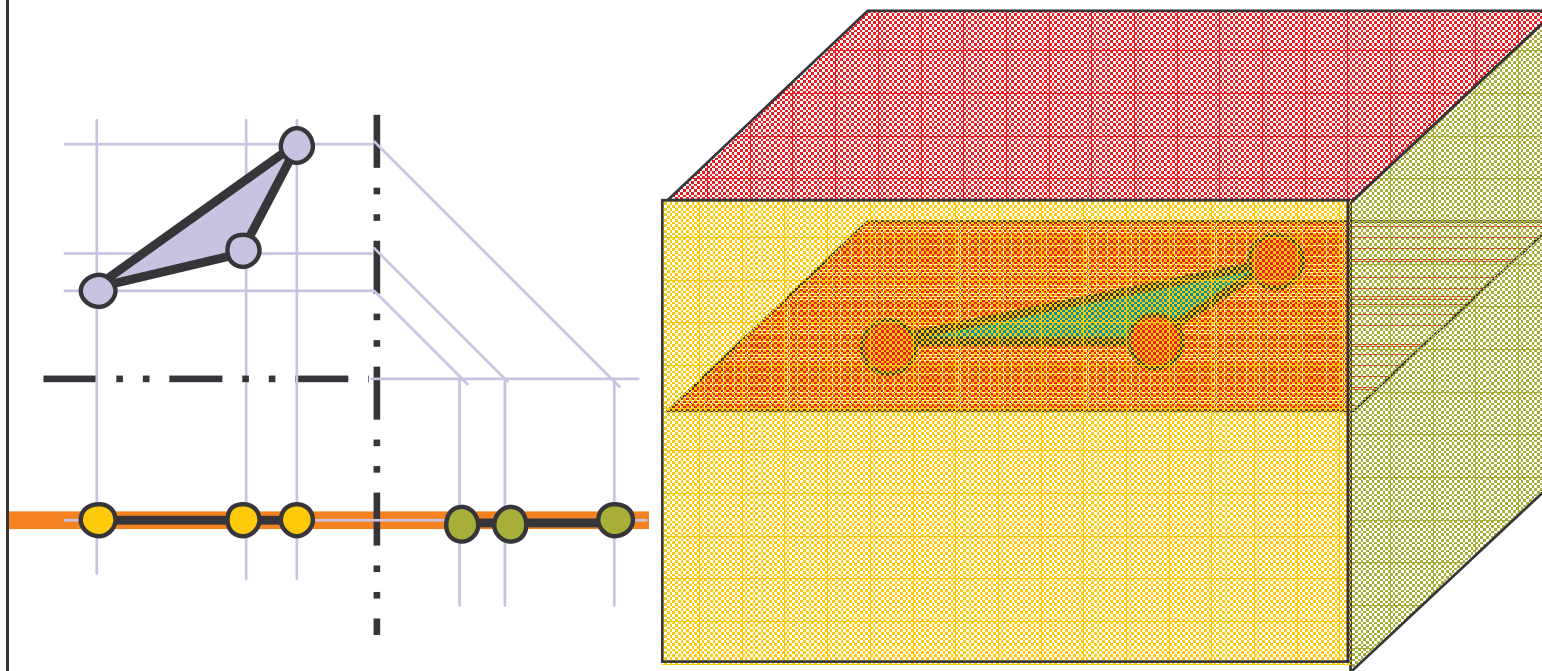
A PLANE

- Parallel to VP



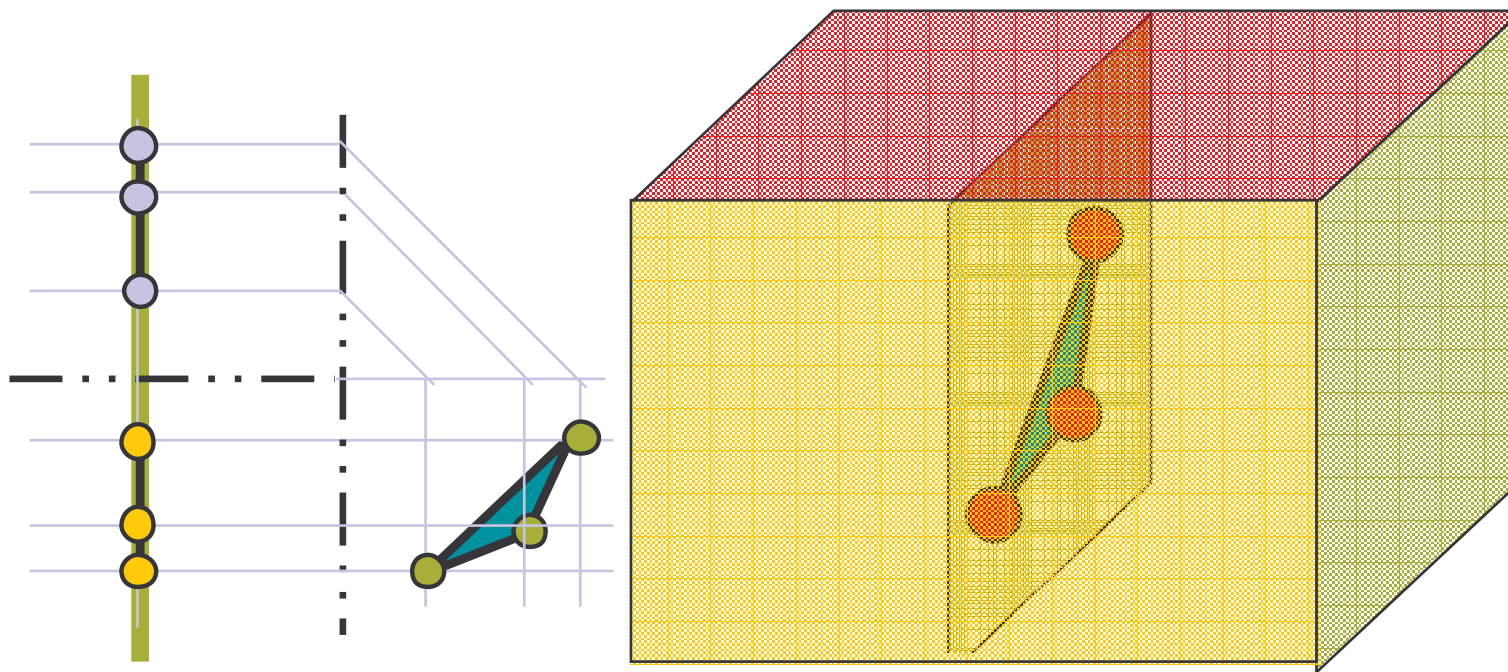
A PLANE

- Parallel to HP



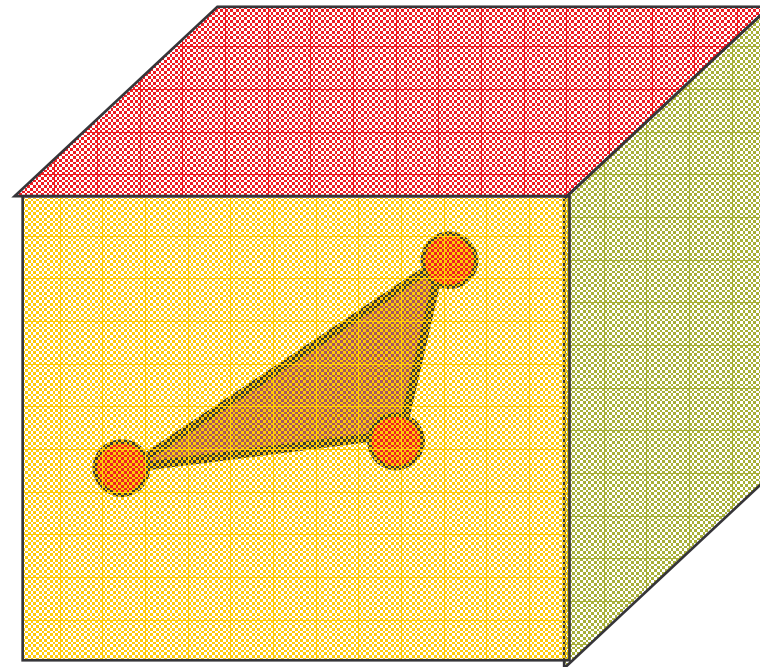
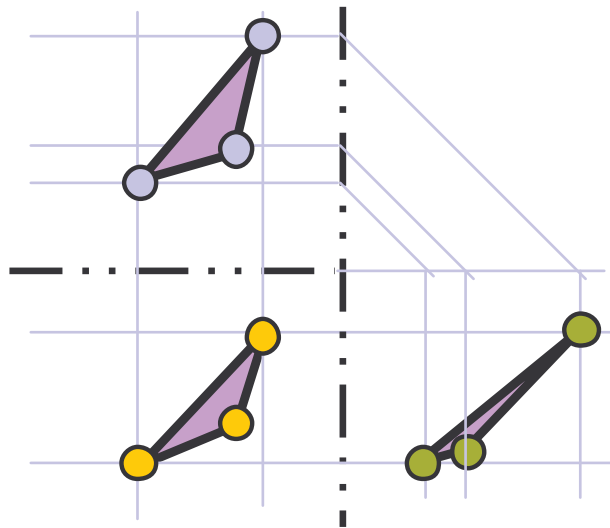
A PLANE

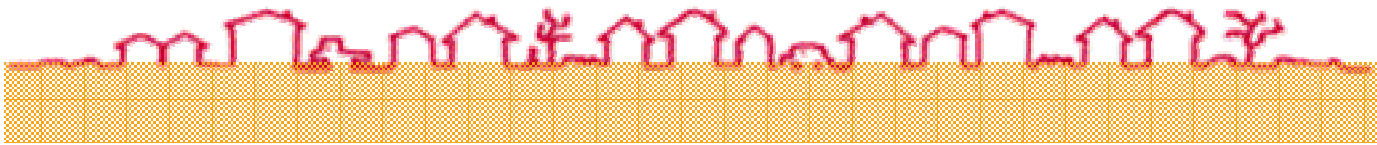
- Parallel to PP



A PLANE

- Arbitrarily oriented in space
 - How does one get its TRUE AREA ?





Have a Great Day!!

