

1.1 - Points, Lines, and Planes

Blue text: Read but don't write in notes

- Name points, lines, and planes
- Name segments and rays
- Sketch intersections of lines and planes
- Solve problems involving lines and planes

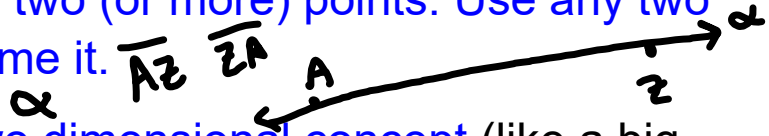
Definitions:

Point, Line, and Plane are known as Undefined Terms. They don't have formal definitions, but they are pretty straight-forward.

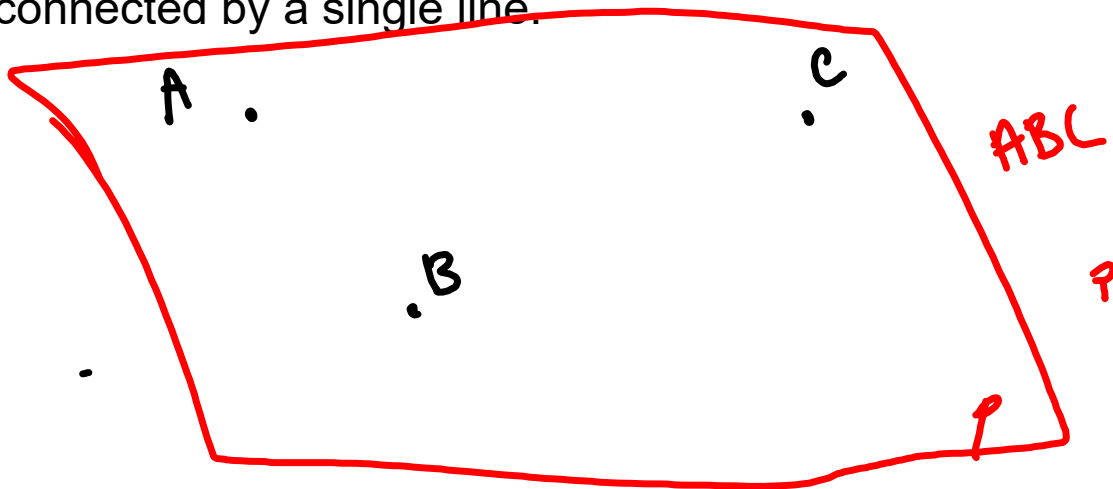
Point: A dot that's infinitely small. Seen by a Label (or name).



- Line: Infinitely long and straight, containing arrows at the "ends" of it, connecting two (or more) points. Use any two points on the line to name it.



Plane: Infinitely long two dimensional concept (like a big piece of paper). Named by three points which can't be connected by a single line.

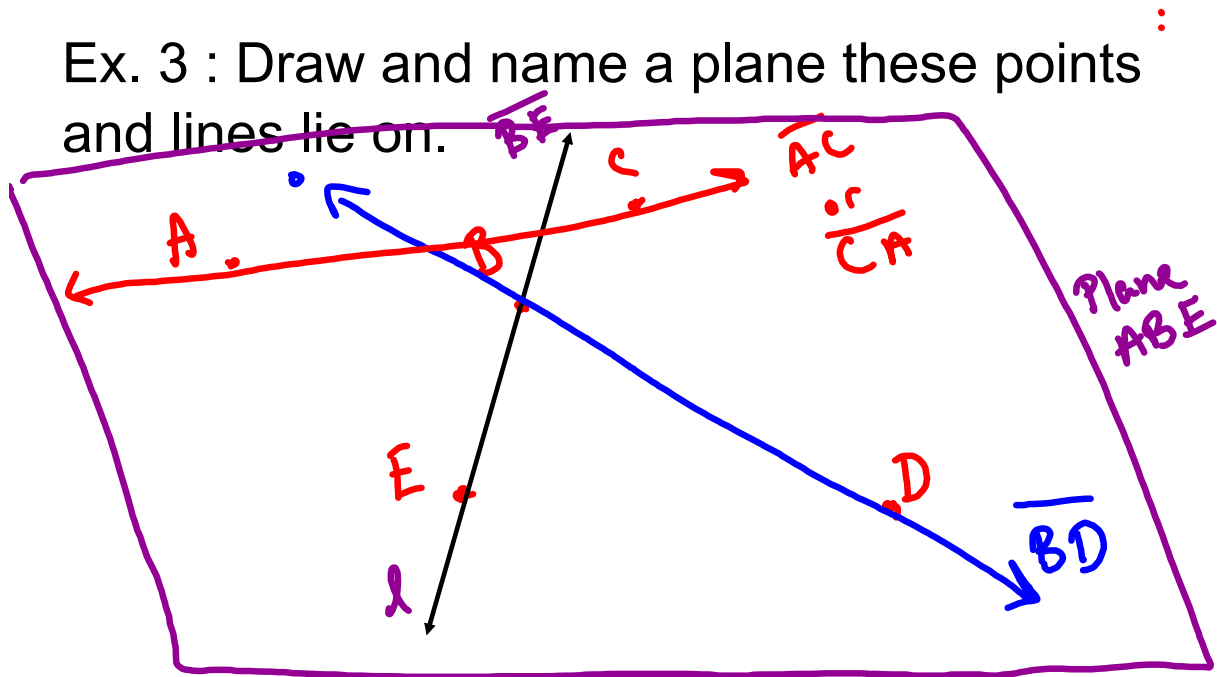


Drawing Points, Lines, and Planes.

Ex. 1 : Draw and name 5 points. (Try to randomly place them)

Ex. 2 : Draw and name 3 lines using those points.

Ex. 3 : Draw and name a plane these points and lines lie on.

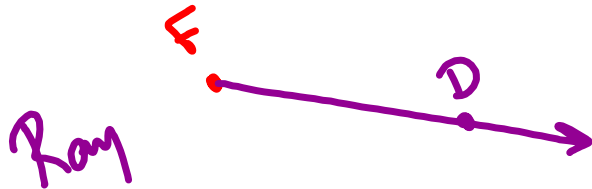


Collinear points are points that lie on the same line.



Coplanar points are points that lie on the same plane.

What if a line starts at a point?

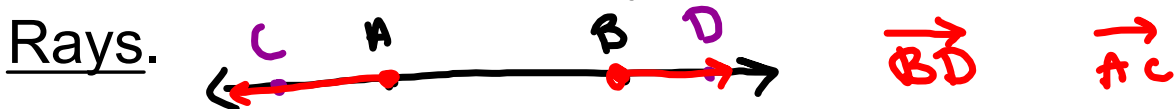


Labeled:



Ray: A line that has an endpoint at one end.

When two rays are collinear but going in opposite directions, they are called Opposite Rays.



What if the line just goes from one endpoint to another?



Labeled:
MP
PM

Line Segment: A line that has two endpoints.

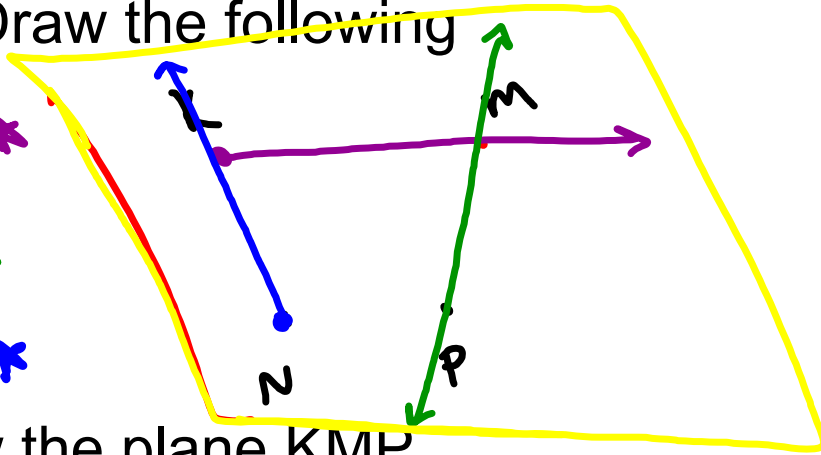
When naming Line Segments or Lines, the order that you write the points does **not matter**.

Ex: Draw the following

\overrightarrow{KM} *

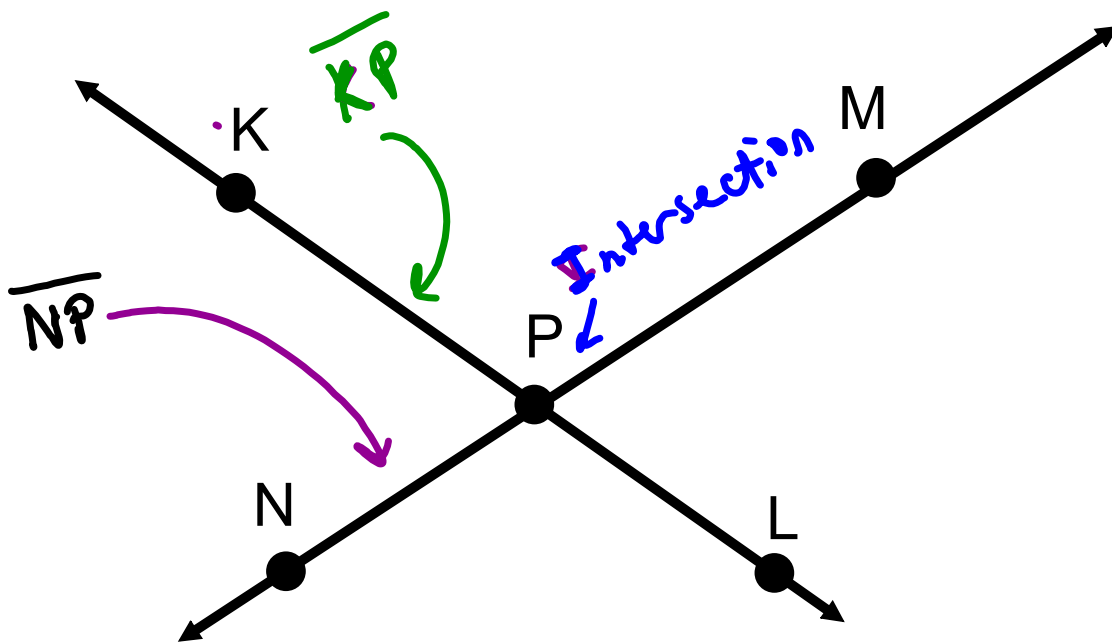
\overleftrightarrow{MP} *

\overrightarrow{NK} *

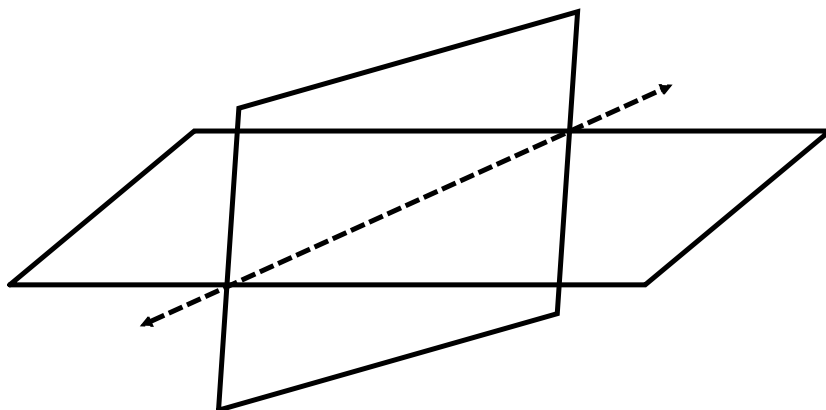


Draw the plane KMP

Intersection: Lines "intersect" when they cross each other. The "point of intersection" is place that they touch.



Planes can intersect as well. (Open your books to page 6 to see examples of planes intersecting)



Homework:

You do NOT have to write the questions out.
Just the answers.

• Page 8 - 10

#'s : 8, 11-13, 15, 27-34

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