Geometry
Study Guide
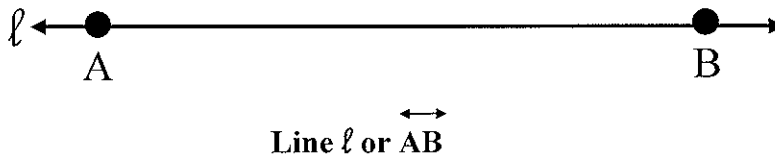**Section 1.2 – Points, Lines, and Planes**

Point
- A specific location in space
- Has no dimensions and no measurable sides
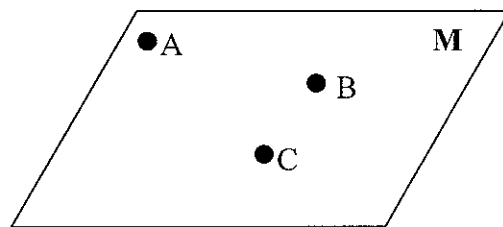- Is represented with a dot and is named using a single capital letter

●A (Point A)

Line
- A collection of points that infinitely extends in 1 dimension
- Extends in both directions and is never ending
- Named by

ℓ ●————————————————————● →
   A   B

Line ℓ or $\overleftrightarrow{AB}$

Collinear points are 2 or more points that lie on the same line (Points A and B are collinear)

Plane
- A flat surface that extends infinitely in 2 dimensions
- Generally named with a single capital letter
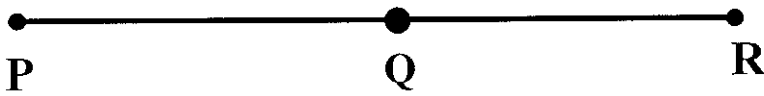- May be named by three points that lie on the plane

●A   M
   ● B
●C

Plane M or Plane ABC

Coplanar points are 2 or more points that lie on the same plane (points A, B and C are coplanar)

Line segment (or segment)
- Consists of the endpoints P and R and all points in between

P   **Q**   **R**

Segment PR or $\overline{PR}$

Ray
- Consists of the initial point A and all points to the right of A

A   **B**

Ray $\overrightarrow{AB}$

Opposite rays
- If C is between A and B, then $\overrightarrow{CA}$ and $\overrightarrow{CB}$ are opposite rays.

A   **C**   **B**