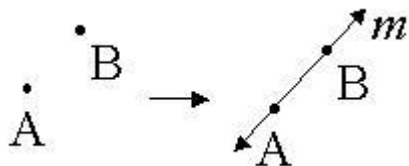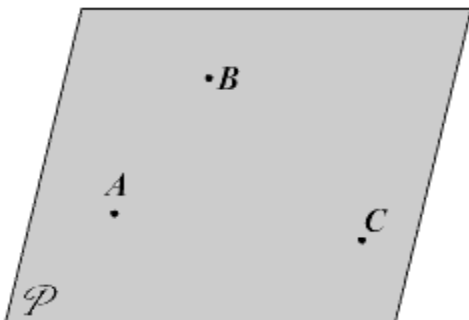## TOPIC 1-3: POSTULATES AND INTERSECTIONS

A ***postulate***, or axiom, is a statement that is accepted as true without proof. Postulates about points, lines & planes help describe geometric properties
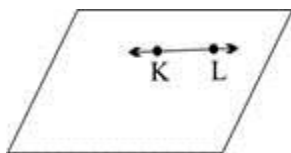
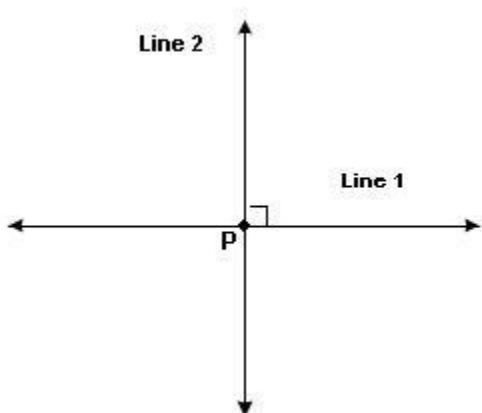➤ Through any two points there is exactly one _____.

➤

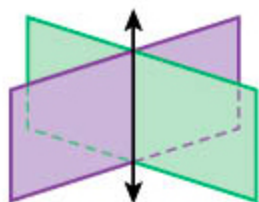➤ Through any three NON-COLLINEAR points there is exactly one _____ containing them.

➤ If two points lie in a plane, then the line containing those points _____ in the plane.
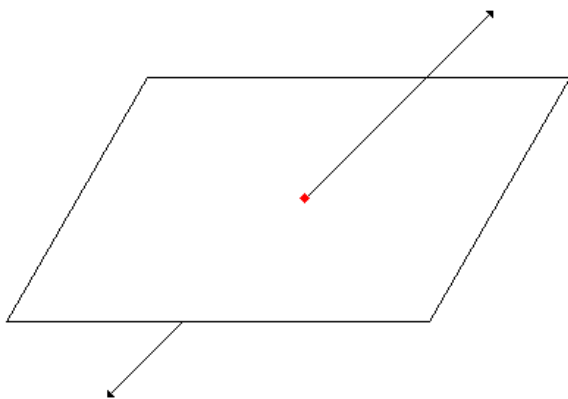
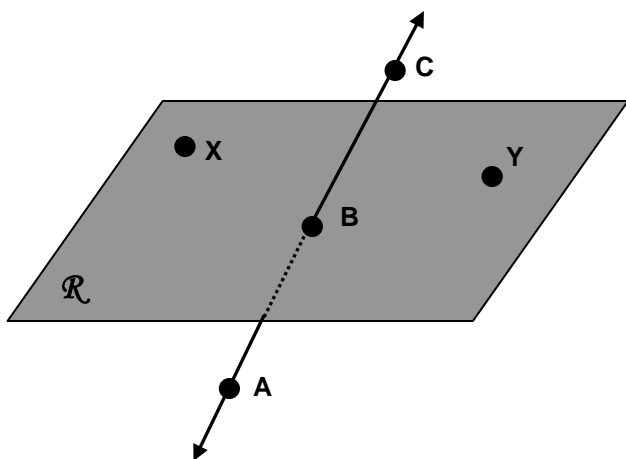➢ If two lines intersect, then they intersect in exactly one _____.

Line 2

Line 1

P

➢ If two planes intersect, then they intersect in exactly one _____.

➢ If a line intersects a plane and is not in the plane, then they intersect in exactly one _____.
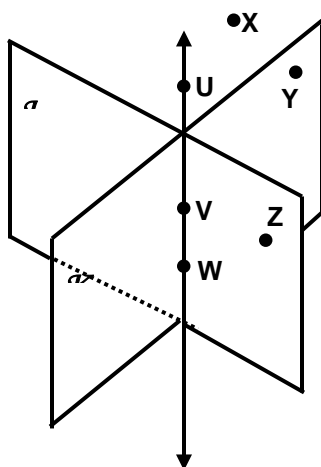
THINGS WE KNOW FROM THE PICTURE:

1) X, B and Y are _____.

2) A, B and C are _____.

3) $\overrightarrow{BA}$ and $\overrightarrow{BC}$ are _____.

4) X, B, Y and C are _____.

a) Name three points that determine plane $\mathcal{J}$.

b) Name a set of collinear points, and a set of non-collinear points.

Collinear Points: Non-Collinear Points:

c) Name a set of points that are coplanar other than those in example a).