Geometry Vocabulary #1:

Undefined terms - term that is used without a specific mathematical definition.

1) **Point** - location - no size - represented by a small dot and with capital letter
Example:

2) **Line** - set of points that extends in 2 opposite directions without end.
- 2 points name a line (in any order) or single lowercase letter
Example:

3) **Plane** - set of points that extends along a flat surface in every direction without end.
- named by any three points of the plane that do not lie on the same line, or single capital letter.
Example:

Definition - statement of the meaning of a word or phrase.

Fundamental Definitions Related to Points:

1) **Space** - the set of all points.
2) **Figure** - any set of points.
A) **Plane Figure** - if points all lie in the same plane
B) **Space Figure** (3-D Figure) - if a figure extends beyond a single plane into space
3) **Intersection** - the set of all points common to two or more figures.
4) **Collinear Points** - points that lie on the same line.
Noncollinear points - points that do not lie on the same line.
5) **Coplanar Figures** - figures that lie on the same plane.
Noncoplanar figures - figures that do not lie on the same plane.

Postulate - the truth of some statements are accepted without proof.

Basic Postulates for Points, Lines, & Planes:

1) **Unique Line Postulate** - through any two points is exactly 1 line.
2) **Line Intersection Postulate** - if 2 lines intersect, then they intersect in exactly one point.
3) **Plane Intersection Postulate** - through any 3 noncollinear points there is exactly 1 plane.

Definitions Related to Segments:

1) **Line Segment** (segment) - part of a line that begins at 1 point and ends at another.
Example:

2) **Length of a Segment** - distance between its endpoints.
3) **Congruent Segments** - segments that are equal in length, symbol is .
Example:

4) **Midpoint** - point that divides the segment into 2 congruent segments.
Simplified:

Example:

Segment Addition Postulate - if point C is between point A and point B, then AC + CB = AB.
Example: