Objective: In this lesson, you will become acquainted with the history, career applications, and logical structure and development of geometry.

The History of Geometry

Greek geometer Pythagoras founded __________________________________________________________.

In about 300 BC, Euclid authored a __________________________________________________________.

The Structure of Geometry

The word Definition is a formal ________________________________________________________________.

In Euclidean geometry, the phrase “undefined terms” refers to ____________________________________________.

An axiom is ____________________________________________________________________________

__________________________________________________________________________________________

Theorems are ____________________________________________________________________________

__________________________________________________________________________________________

The logical deduction of the theorem is called a ________________.

Eight of the axioms of geometry, which are stated in terms of points, lines, planes, and distances:

1. Given any two points A and B, ____________________________________________________________________

__________________________________________________________________________________________

2. The Distance Postulate: For any two distinct points, ____________________________________________________________________

__________________________________________________________________________________________

3. The Ruler Postulate: The set of points on any line are in one-to-one correspondence with __________

__________________________________________________________________________________________
4. The Ruler Placement Postulate: Given any two points $A$ and $B$ on a line, ________________________________

This axiom ensures that any point can be chosen as the origin. That point, together with any other point, can be used to define a positive distance.

5. Every plane contains at least three points that do not lie on the same line. There are at least four points in space that ________________________________.

This axiom distinguishes between ________________________________

______________________________________________________________________________________________

6. If two points lie on a plane, ________________________________.

7. Any three points lie ________________________________.

Any three points not on the same line ________________________________.

8. The intersection of two planes (if it exists) ________________________________.

Careers and Geometry

Make a list of careers that use Geometry:

1) ________________________________
2) ________________________________
3) ________________________________
4) ________________________________
5) ________________________________
6) ________________________________
7) ________________________________
8) ________________________________
9) ________________________________
10) ________________________________
11) ________________________________