**Notes #1 Points, Lines, and Planes Date: \_\_\_\_\_\_\_\_\_\_\_**

***Target Goals: Understand and use the basic undefined terms and defined terms of geometry.***

***Sketch the intersections of lines and planes.***

A **definition** uses known words to describe a new word. In geometry, some words, such as *point, line, and plane* are **undefined terms**. Although these words are not formally defined, it is important to have a general agreement about what each word means.

**UNDEFINED TERMS:**

**Point**:

**Line:**

**Plane**:

N

K

R

M

L

P

**Ex 1:** a.Name three points that are collinear.

b. Name four points that are not coplanar.

c. Name three points that are not collinear.

**Ex 2:** a. Draw 3 collinear points A, B, C.

b. Draw point D not collinear with ABC.

c. Draw .

d. Draw ray .

e. Draw segment .

f. Name opposite rays.

**Ex 3:**  Draw a line. Label three points on the line and name a pair of opposite rays.

**SKETCHING INTERSECTIONS OF LINES AND PLANES:**

Two or more geometric figures \_\_\_\_\_\_\_\_ if they have one or more points in common. The of the figures is the set of points the figures have in common.

**Ex 4:** Draw two intersecting lines. **Ex 5:** Sketch a line that intersects a plane in one point.

**Ex 6:** Sketch two planes that intersect. **Ex 7:** Sketch two planes that do not intersect. Describe their intersection.

A

B

C

E

D

F

**Ex 8:** Answer True or False for the following:

1. Points A, B, and C are collinear. \_\_\_\_\_
2. Points A, B, and C are coplanar. \_\_\_\_\_
3. Point F lies on . \_\_\_\_\_
4. lies on plane DEF. \_\_\_\_\_
5.  and  intersect. \_\_\_\_\_
6.  is the intersection of plane ABC and plane DEF. \_\_\_\_