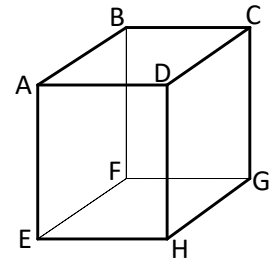


1. Examine the illustration. Identify the places where lines intersect each other. What kind of geometric figure is the intersection of two lines? **Point**

**POSTULATE:** The intersection of two lines is a **Point**.

Follow-Up Questions: How many lines intersect at each corner of the figure? **3**

Do you think there is a limit to the number of lines that can intersect at a certain point? **NO**



2. Identify the places in the illustration where planes intersect each other. What kind of geometric figure is the intersection of two planes? **Line**

**POSTULATE:** The intersection of two planes is a **Line**.

Follow-Up Questions: How many planes intersect at each corner of the figure? **3**

The intersection of three planes is a **Point**.

Do you think there is a limit to the number of planes that can intersect? **NO**

3. Look at A and B in the illustration. How many lines pass through both of these points? **yes 1**

**POSTULATE:** Through any two points there is **exactly one line**.

Follow-Up Questions: How many points are on a line? **Infinite**

How many points are used to name a line? **2**

4. Look at A, B, and C in the illustration. How many planes pass through these three non-collinear points? **1**

**POSTULATE:** Through any three non-collinear points there is **Exactly one plane**.

Follow-Up Questions: How many points are in a plane? **Infinite**

How many points are used to name a plane? **3**

How many lines are in a plane? **infinite**

5. Pick any plane in the illustration. Then pick two points that are in the plane. Name the line that passes through these two points.  **$\overleftrightarrow{AD}$**  Is the line in the plane that you picked? **yes**

**POSTULATE:** If two points are in a plane, then the line containing them **is in the plane**.

Follow-Up Questions: What happens to the line if one of the points picked is not in the plane?

**Then the line is not in the plane**

What happens to the line if both of the points picked are not in the plane? (2 answers)

**Then the line is parallel to the plane or  
The line would intersect the plane at a point.**