

Geometry  
1.1 Points, Lines, Planes

Objectives:

- Student will be able to identify and model points, lines, and planes.
- Student will be able to identify intersecting line and planes.

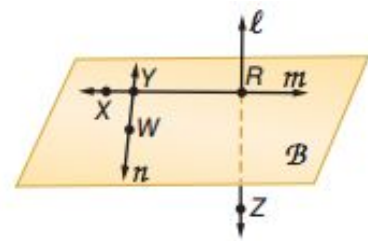
Example:

1. Use the figure to name each of the following:

a. a line containing point  $X$

b. a line containing point  $Z$

c. a plane containing points  $W$  and  $R$



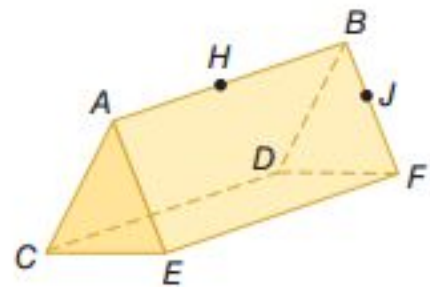
2. Refer to the figure to answer the following:

a. How many planes are shown in the figure?

b. Name three points that are collinear.

c. Are points  $A$ ,  $H$ ,  $J$ , and  $D$  coplanar? Explain

d. Are points  $B$ ,  $D$ , and  $F$  coplanar? Explain



3. Draw and label a figure for each of the following relationships:

a. Line  $m$  intersects plane  $R$  at a single point.

b. Points  $X$  and  $Y$  lie on  $\overset{\leftrightarrow}{CD}$

c.  $\overset{\leftrightarrow}{FG}$  and  $\overset{\leftrightarrow}{JK}$  intersect at  $P(4,3)$ , where point  $F$  is at  $(-2,5)$  and point  $J$  is at  $(7,9)$

4. When two cars enter an intersection at the same time on opposing paths, one of the cars must adjust its speed or direction to avoid a collision. Two airplanes, however, can cross paths while traveling in different directions without colliding. Explain how this is possible.

