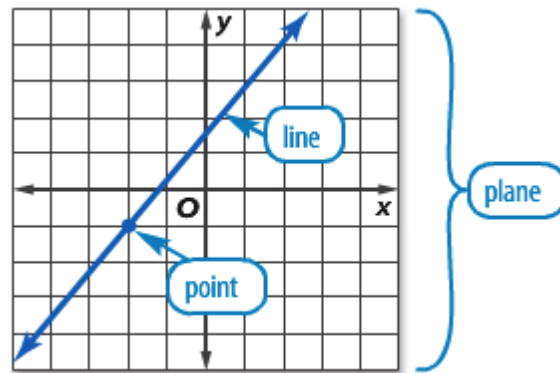
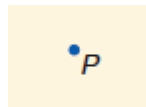


Points, Lines, and Planes classwork

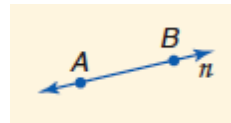


Terms in Geometry:

- **Point:** A particular location. Points have no size. They are named with 1 letter.



- **Line:** Lines extend indefinitely, and have neither thickness nor width.



- Please name the line above in three ways.

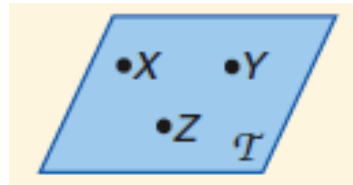
1) _____

2) _____

3) _____

- **Collinear:** points on the _____ line

- **Plane:** A flat, two-dimensional surface that extends indefinitely in all directions and having no thickness.



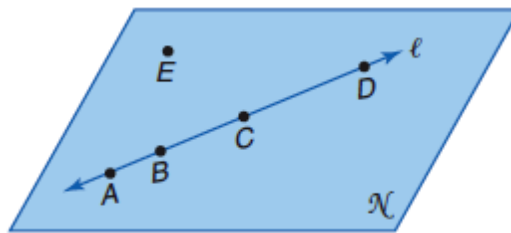
- Please name the plane above in two different ways.

1) _____

2) _____

- **Coplanar** : points on the _____ plane

Ex #1: Please use the figure to name each of the following.



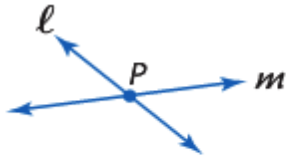
- A line containing point A
- A plane containing point C
- A point collinear with points A and C .

Ex #2: Name the geometric shape modeled by each object (either point, line, or plane).

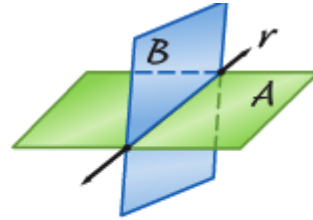
- a 10×12 patio
- a telephone wire
- a star in the sky

Intersections of Lines and Planes:

The **intersection** of two geometric figures is the set of all points they have in common.



P represents the intersection of lines l and m .



Line r represents the intersection of planes A and B .

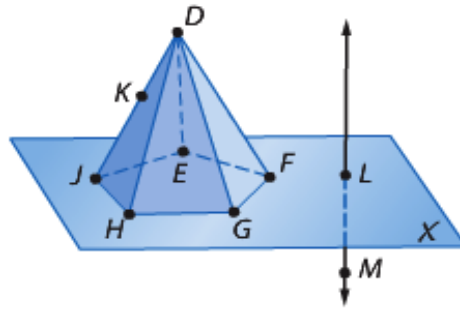
Ex#3: Please draw a plane. Then, draw one line on the plane. Finally, draw a second line *through* the plane, that intersects the first line. (Like a pencil through a sheet of paper.)

Ex #4: Please draw and label a figure for each relationship.

a) Lines \overline{AB} and \overline{CD} intersect at point P .

b) \overline{TU} lies in plane Q and contains point R .

Ex#5: Please refer to the figure below to answer the following questions.



- How many planes are pictured in the figure?
(Hint: the base of the pyramid is the same plane as plane X .)
- Name three collinear points.
- Name the intersection of plane HDG and plane X .
(Hint: it's a line segment)
- At what point does line \overline{LM} and plane X intersect?
- Do lines \overline{JH} and \overline{DG} intersect?