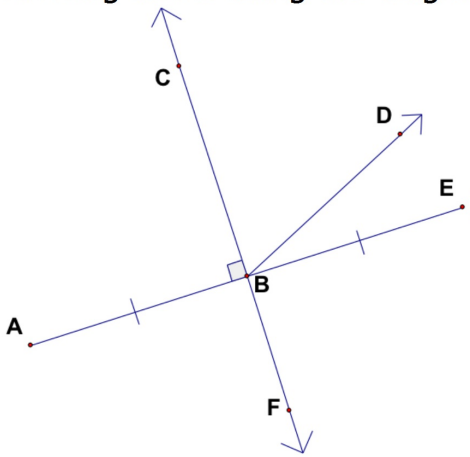
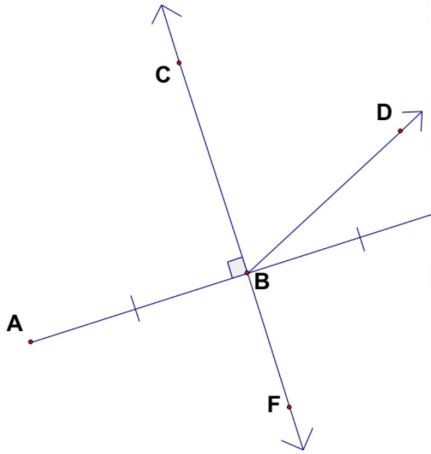
Directions: Using the correct symbols, name the following terms using the diagram below.



1. A line: $\overleftrightarrow{CF}$
2. A ray: $\overrightarrow{BD}$, $\overrightarrow{BC}$, $\overrightarrow{BF}$



3. A line segment: $\overline{EA}$, $\overline{AE}$
4. A right angle: $\angle B$, $\angle CBA$
5. 3 collinear points: ABE, CBF

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:

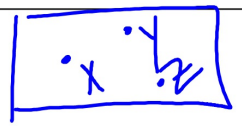
Point: a location denoted w/ a capital letter :A

Line: straight w/ pts extends forever $\overleftrightarrow{MP}$ line MP $\overleftrightarrow{MP}$

Plane: a flat 2D surface extends forever

□XYZ

Plane XYZ



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

·L, ·M, ·N

b. Name four points that are not coplanar.

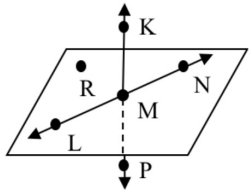
·L, ·M, ·N, ·R

c. Name three points that are not collinear.

·R, ·M, ·N

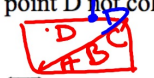
·K, ·R, ·P

·L, ·P, ·K

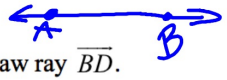


Ex 2: a. Draw 3 collinear points A, B, C.

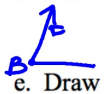
b. Draw point D not collinear with ABC.



c. Draw $\overline{AB}$.



d. Draw ray $\overrightarrow{BD}$.

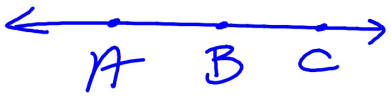


e. Draw segment $\overline{CD}$.

f. Name opposite rays.

based on a)

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



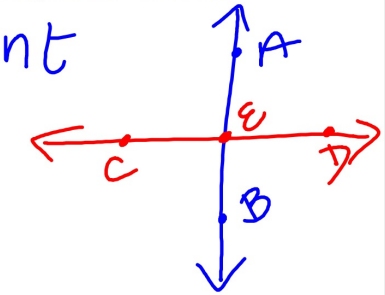
SKETCHING INTERSECTIONS OF LINES AND PLANES:

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

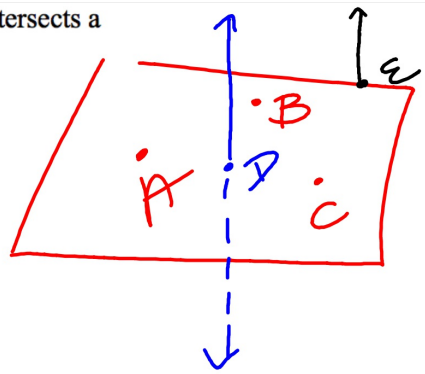
Ex 4: Draw two intersecting lines.

intersect at a point

intersect at ·E

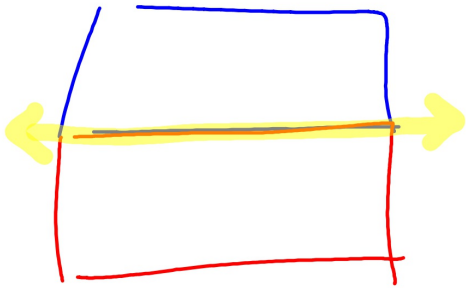


Ex 5: Sketch a line that intersects a plane in one point.

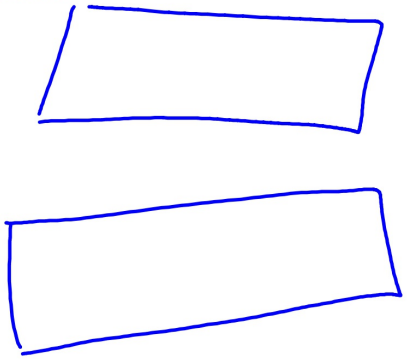


Ex 6: Sketch two planes that intersect.

at a line



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

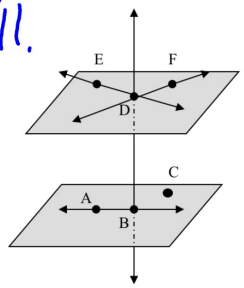


Ex 8: Answer True or False for the following:

a) Points A, B, and C are collinear. F
b) Points A, B, and C are coplanar. T
c) Point F lies on $\overline{DE}$. F
d) $\overleftrightarrow{DE}$ lies on plane DEF. T
e) $\overleftrightarrow{BD}$ and $\overleftrightarrow{DE}$ intersect. T
f) $\overleftrightarrow{BD}$ is the intersection of plane ABC and plane DEF. F

D

planes are ||.



Protractor -- what is it?

Based on Google definitions, a protractor is an instrument for measuring angles, typically in the form of a flat semi-circle with degrees along the curved edge.

What is an angle?

The space (usually measured in degrees) between two intersecting lines or surfaces at or close to the point where they meet.