1-1 Points, Lines, and Planes

Welcome to Geometry!

Today we will:

* define, identify, and model points lines, and planes
* identify intersecting lines and planes

TN State Standard G-CO Experiment with transformations in the plane.

A **point** is a location.

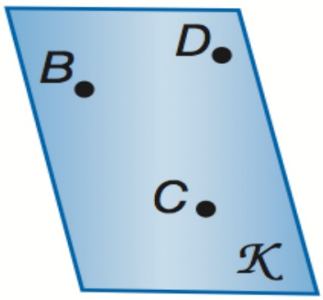
It has neither shape nor size.

A **line** is made up of points and has no thickness or width.

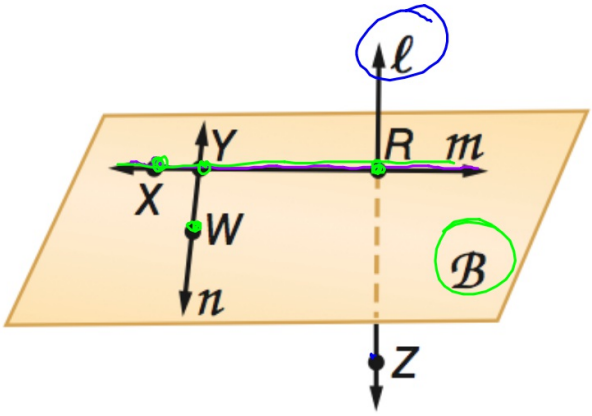
There is exactly one line through any two points.

A **plane** is a flat surface made up of points that extends infinitely in all directions.

There is exactly one plane through any three points not on the same line.



Geometry BELL WORK (do this now)



Use the figure to name each of the following.

1. a line containing point X line m $\overleftrightarrow{XY}$ $\overleftrightarrow{XR}$ $\overleftrightarrow{YR}$
2. a line containing point Z line ℓ $\overleftrightarrow{ZR}$
3. a plane containing points W and R

plane B plane WRX

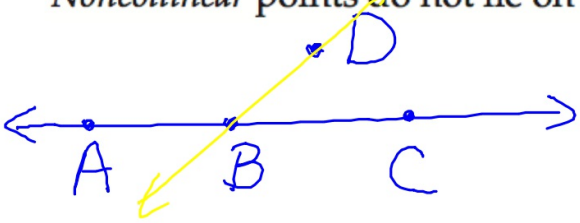
"CO" : together

collinear : on the same line

coplanar : on the same plane

Collinear points are points that lie on the same line.

Noncollinear points do not lie on the same line.

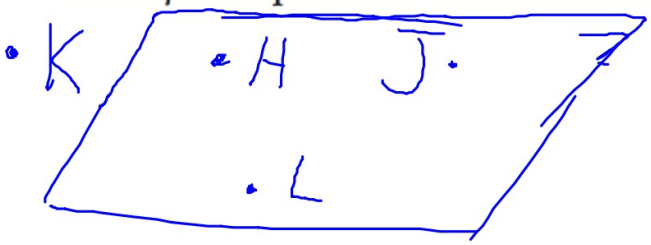


points A, B, and C are collinear

Any two points are collinear
b/c you could draw a line through them

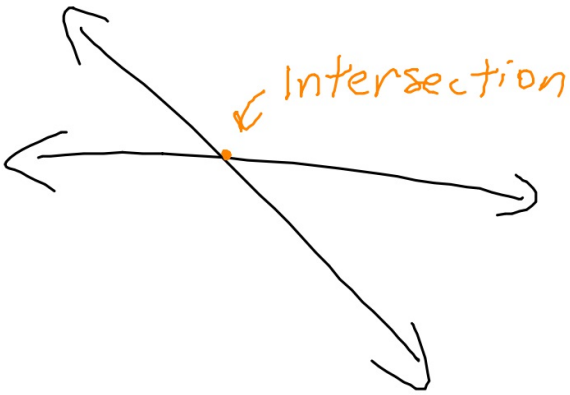
Coplanar points are points that lie in the same plane.

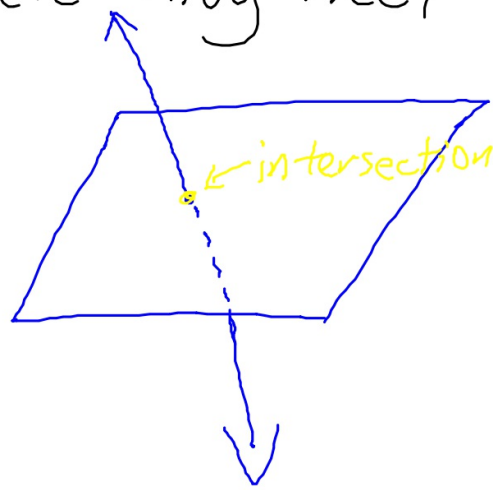
Noncoplanar points do not lie in the same plane.

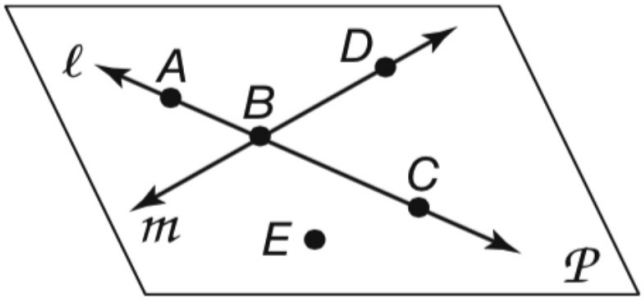


points H, J, and L are coplanar

Intersection: where they meet

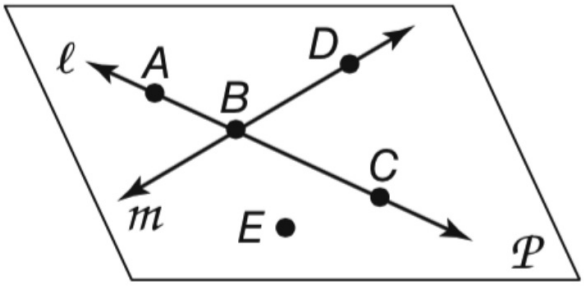






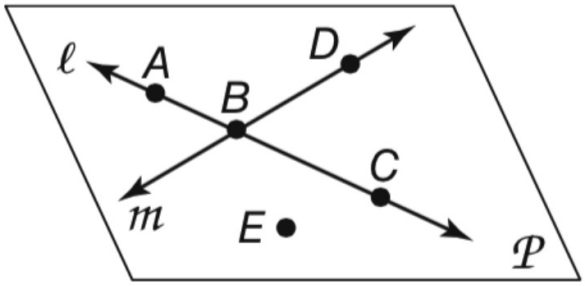
Refer to the figure.

3. Name a point not on $\overleftrightarrow{AC}$.



Refer to the figure.

2. What is another name for line m?



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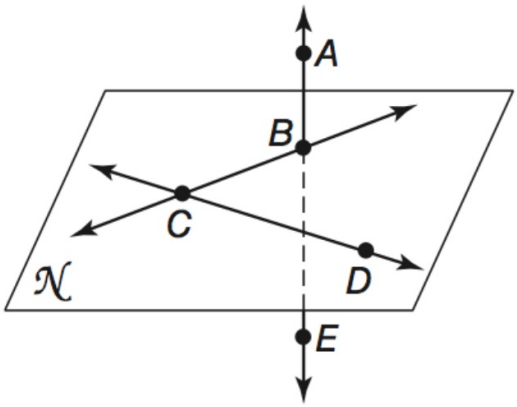
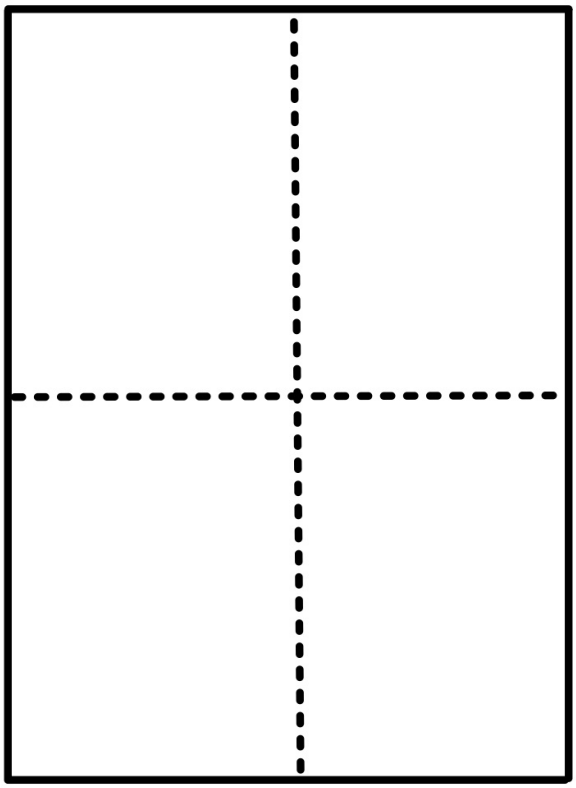


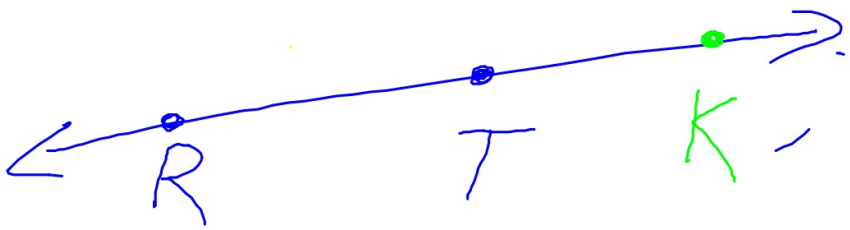
1. Name the intersection of plane $\mathcal{N}$ and line $\overleftrightarrow{AE}$.

Set up your paper for 4 descriptions and drawings:



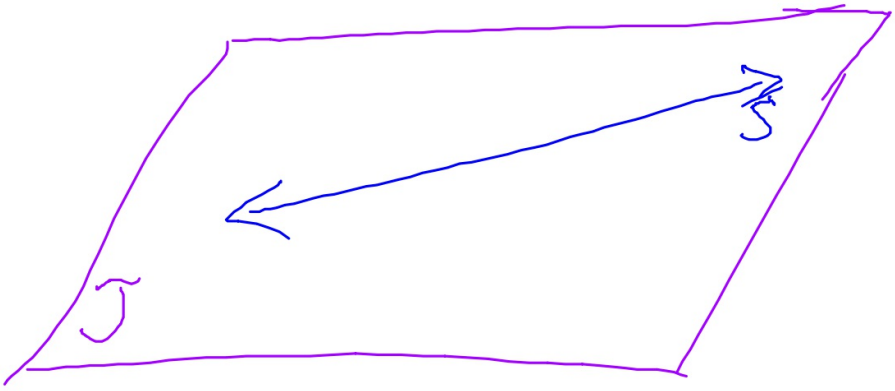
Draw and label a figure for each relationship.

Point K lies on $\overleftrightarrow{RT}$.



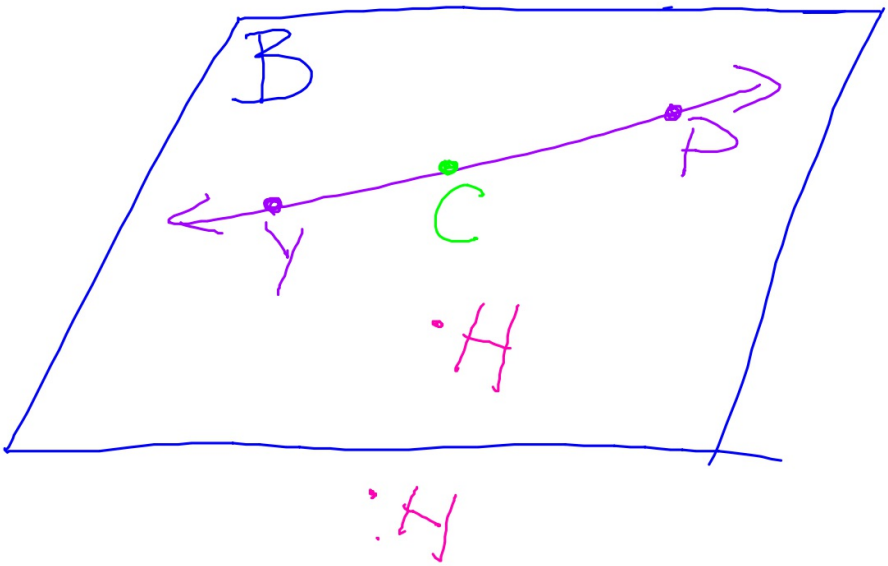
Draw and label a figure for each relationship.

Plane $\mathcal{J}$ contains line s.



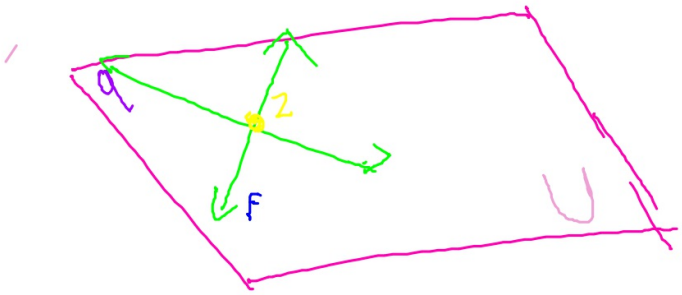
Draw and label a figure for each relationship.

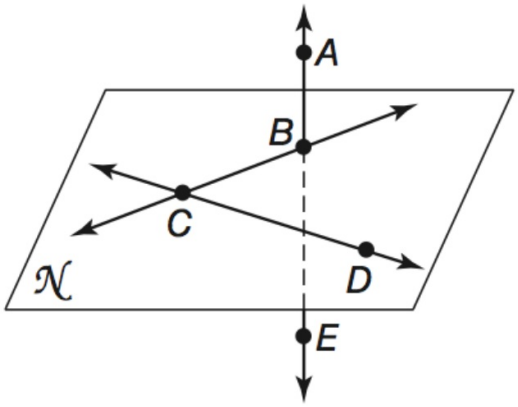
$\overleftrightarrow{YP}$ lies in plane $\mathcal{B}$ and contains point C, but does not contain point H.



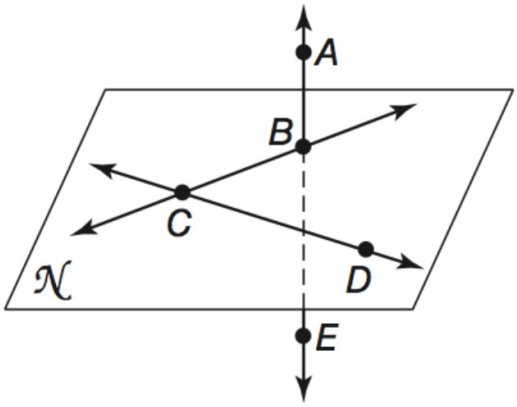
Draw and label a figure for each relationship.

Lines q and f intersect at point Z in plane $\mathcal{U}$.



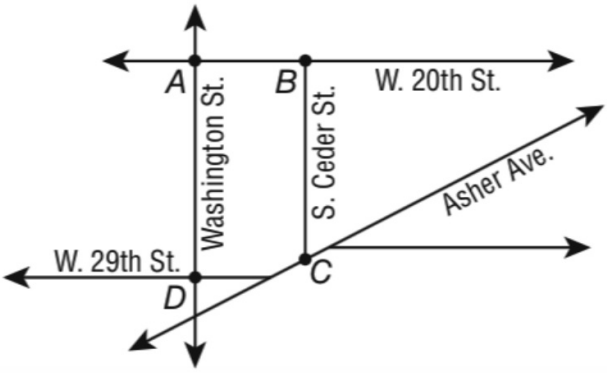


2. Name the intersection of $\overleftrightarrow{BC}$ and $\overleftrightarrow{DC}$.



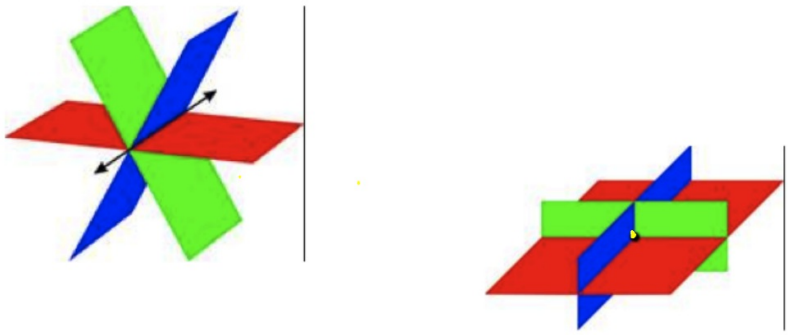
3. Does $\overleftrightarrow{DC}$ intersect $\overleftrightarrow{AE}$? Explain.

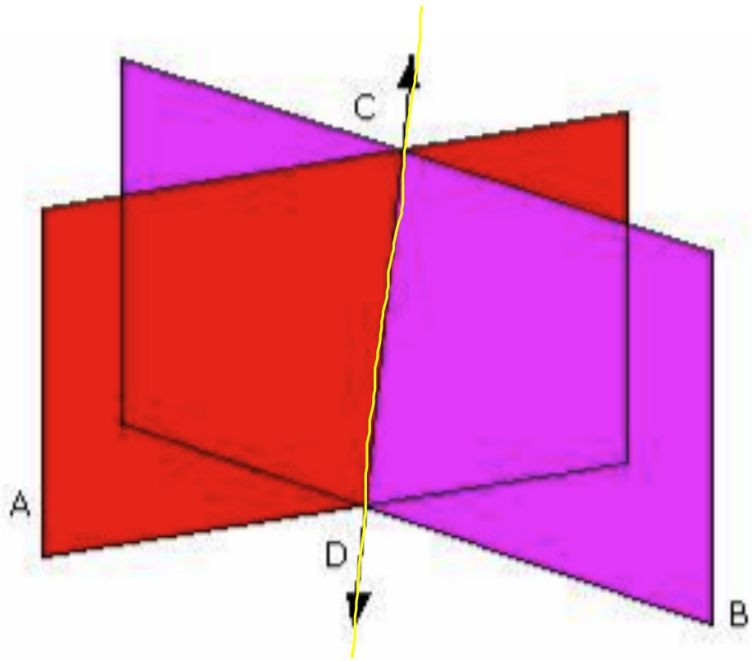
STREETS The map shows some of the roads in downtown Little Rock. Lines are used to represent streets and points are used to represent intersections. Four of the street intersections are labeled. What street corresponds to line AB?



Points Lines and Planes Scavenger Hunt

1.1 Points Lines and Planes Worksheet




C
A
D
B