

Understanding the Undefined Terms

Lesson Objective: I will be able to (IWBAT) name and identify undefined terms and the geometric figures they create.

Naming Points, Lines, and Planes

<u>Point</u>		point A
<u>Line</u>		line AB line BA $\overleftrightarrow{AB}$ $\overleftrightarrow{BA}$ line l
<u>Plane</u>		plane ABC (use 3 points on plane NOT on same line) plane M

Collinear:

on the same line no dot = no point!

Coplanar:

on the same plane

Examples:

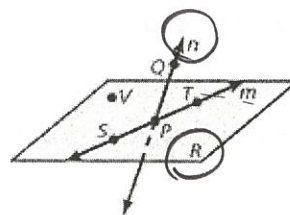
1. Give 2 other names for $\overleftrightarrow{PQ}$ and plane R.

$\overleftrightarrow{QP}$, line n } plane SVT
plane SPV

2. Name 3 points that are collinear and 3 points that are coplanar.

S, P, T

S, V, T



Using Defined Terms: Defined terms are terms that can be described using words such as: point or line

The definitions below use $\overleftrightarrow{AB}$ shown here:



Vocab Term	Definition	Diagram	Name
<u>Segment</u>	consists of endpoints A and B + all points on line AB that are between A and B		segment AB $\overline{AB}$ $\overline{BA}$
<u>Ray</u>	consists of endpoint (A) and all points on line AB that lie on same side of (A) as (B)		$\overrightarrow{AB}$ ray AB $\overrightarrow{BA}$ ray BA

$\overrightarrow{AD}$ and $\overrightarrow{AC}$ ($\overrightarrow{AB}$)

Vocab Term	Definition	Diagram	Name
<u>Opposite Rays</u>	if point C is between A and B, then $\overrightarrow{CA}$ and $\overrightarrow{CB}$ are opposite rays		$\overrightarrow{CA} + \overrightarrow{CB}$

Examples:

3. Give another name for $\overline{GH}$.

$\overline{HG}$

4. Name all rays with endpoint J.

$\overrightarrow{JH}$

$\overrightarrow{JG}$

$\overrightarrow{JE}$

$\overrightarrow{JF}$



5. Which of the rays from #4 are opposite rays?

OPP

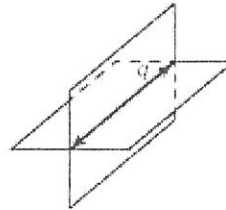
OPP

Sketching Intersections

Two or more geometric figures intersect if they have one or more points in common



2 lines intersect in 1 point



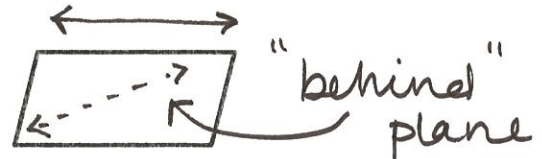
2 planes intersect in 1 line

Examples: What about lines and planes?

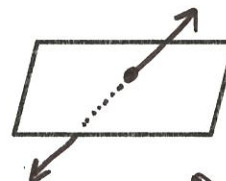
6. Sketch a plane and a line that is in the plane.



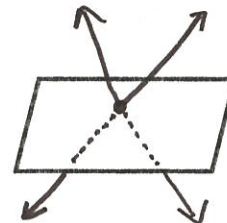
7. Sketch a plane and a line that does not intersect the plane.



8. Sketch a plane and a line that intersects the plane at a point.



9. Sketch two different lines that intersect the plane at the same point.



Think About It...look back to #8 and #9. Do those lines lie in the same plane as the one drawn? Explain.

No! the lines go through the plane, they aren't in the plane