Name Key Date_____ Period _____

Understanding the Undefined Terms

Lesson Objective: IWBAT name and identify undefined terms and the geometric figures they create.

Naming Points, Lines, and Planes

Point		point A
Line		line l line AB line BA $\overleftrightarrow{AB}$ $\overleftrightarrow{BA}$ *use any 2 points on line
Plane		plane M plane ABC *use any 3 points (not on same line) on plane

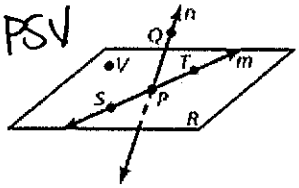
Collinear: on the same line

Coplanar: on the same plane

Examples:

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

   line PQ, $\overleftrightarrow{QP}$, line QP, line n



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

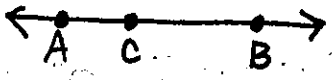
   collinear: S, P, T

   coplanar: P, 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
Segment	consists of endpoints A and B, + all points on line AB that are between A and B	endpt. A — B endpt.	$\overline{AB}$, $\overline{BA}$, line segment A or segment A
Ray	consists of endpoint (A) and all points on line AB that lie on same side of (A) as (B)	endpt A → B ← A endpt B	$\overrightarrow{AB}$ $\overrightarrow{BA}$

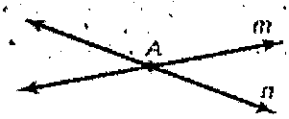
Vocab Term	Definition	Diagram	Name
Opposite Rays	If point C is between A and B, then $\overrightarrow{CA}$ and $\overrightarrow{CB}$ are opposite rays		$\overrightarrow{CA}$ $\overrightarrow{CB}$

Examples:

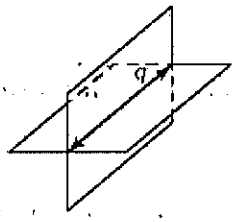
3. Give another name for $\overline{GH}$. $\overline{HG}$, segment GH
4. Name all rays with endpoint J. $\overrightarrow{JE}$, $\overrightarrow{JG}$, $\overrightarrow{JH}$, $\overrightarrow{JF}$
5. Which of the rays from #4 are opposite rays?
   $\overrightarrow{JE}$ + $\overrightarrow{JF}$; $\overrightarrow{JH}$ + $\overrightarrow{JG}$

Sketching Intersections

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



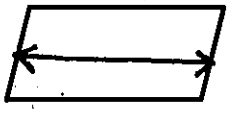
2 diff. lines intersect → point



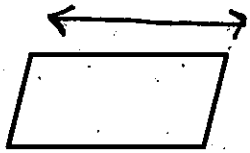
2 diff. planes intersect → line

Examples: What about lines and planes?

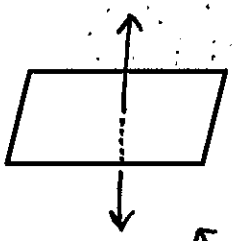
6. Sketch a plane and a line that is in the plane.



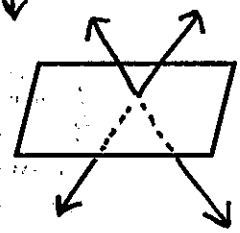
7. Sketch a plane and a line that does not intersect the plane.



8. Sketch a plane and a line that intersects the plant 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, a line in same plane would have all points intersecting, not just 1.