

Name:

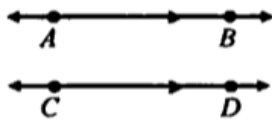
Date:

Topic:

Class:

Main Ideas/Questions

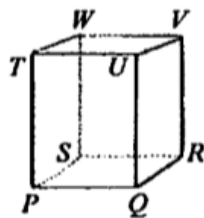
Notes/Examples

**PARALLEL  
Lines**

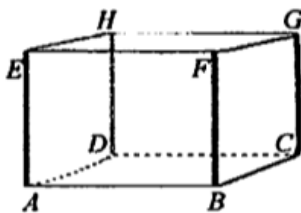
- Two coplanar lines that do not intersect.
- Arrows are used to indicate the lines are parallel.
- Symbolic Notation:  $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$   
( $\parallel$ )

**PARALLEL  
Planes**

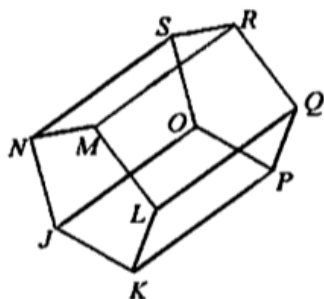
- Planes that do not intersect.
- Symbolic Notation: plane J  $\parallel$  plane K

**SKEW  
LINES**

- Non-coplanar lines that do not intersect.
- Examples:  $\overline{PS}$  &  $\overline{VR}$   
 $\overline{TW}$  &  $\overline{UQ}$   
 $\overline{PT}$  &  $\overline{QR}$

**Examples!**

- Name all segments parallel to  $\overline{AE}$ .  $\overline{BF}, \overline{DH}, \overline{CG}$
  - Give two examples of parallel planes.
    - (1) plane ABF & plane DCG
    - (2) plane ADH & plane BCG
  - Name all segments skew to  $\overline{GH}$ .  $\overline{FB}, \overline{EA}, \overline{AD}, \overline{BC}$



- Name all segments parallel to  $\overline{JK}$ .  $\overline{OP}$
  - Name all segments parallel to  $\overline{NS}$ .  $\overline{JO}, \overline{KP}, \overline{LQ}, \overline{MR}$
  - Name a plane parallel to plane JKL. plane PQR
  - Name four segments skew to  $\overline{RQ}$ .  $\overline{JO}, \overline{JK}, \overline{JN}, \overline{PK}$

# TRANSVERSAL



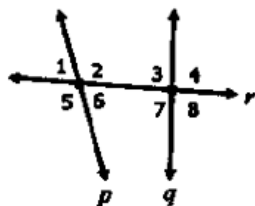
• A line that intersects two or more lines.

• Example:  $\overleftrightarrow{t}$

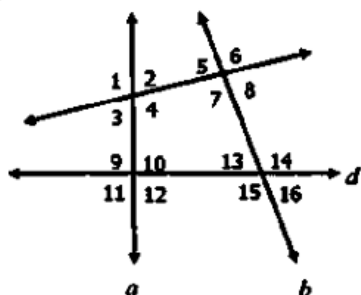
## ANGLES formed by TRANSVERSALS

Diagram	Angle Pairs	Examples
	<b>Corresponding Angles</b> (Angles on the same side of the transversal and in the same position.)	$\angle 1 + \angle 5$ , $\angle 2 + \angle 6$ $\angle 4 + \angle 8$ , $\angle 3 + \angle 7$
	<b>Alternate Interior Angles</b> (Interior angles, non-adjacent, and on opposite sides of the transversal.)	$\angle 4 + \angle 6$ $\angle 3 + \angle 5$
	<b>Alternate Exterior Angles</b> (Exterior angles, non-adjacent, and on opposite sides of the transversal.)	$\angle 1 + \angle 7$ $\angle 2 + \angle 8$
	<b>Consecutive Interior Angles</b> (Interior angles that are on the same side of the transversal.)	$\angle 4 + \angle 5$ $\angle 3 + \angle 6$

**Examples!** Name the type of angle relationship. If no relationship, write "none."



- |                              |                      |
|------------------------------|----------------------|
| a. $\angle 1$ and $\angle 8$ | Alt. Exterior        |
| b. $\angle 2$ and $\angle 3$ | Consecutive Interior |
| c. $\angle 5$ and $\angle 7$ | Corresponding        |
| d. $\angle 2$ and $\angle 7$ | Alt. Interior        |
| e. $\angle 1$ and $\angle 3$ | Corresponding        |
| f. $\angle 6$ and $\angle 7$ | Consecutive Interior |



- |                               |                      |
|-------------------------------|----------------------|
| a. $\angle 5$ and $\angle 13$ | Corresponding        |
| b. $\angle 7$ and $\angle 14$ | Alt. Interior        |
| c. $\angle 3$ and $\angle 6$  | Alt. Exterior        |
| d. $\angle 9$ and $\angle 16$ | Alt. Exterior        |
| e. $\angle 4$ and $\angle 7$  | Consecutive Interior |
| f. $\angle 2$ and $\angle 10$ | Corresponding        |
| g. $\angle 8$ and $\angle 14$ | Consecutive Interior |
| h. $\angle 6$ and $\angle 11$ | None                 |
| i. $\angle 4$ and $\angle 13$ | None                 |
| j. $\angle 4$ and $\angle 9$  | Alt. Interior        |

**Important!**  
Angles must belong to the SAME transversal to be an angle pair.