

Section 3.1 Parallel Lines and Transversals

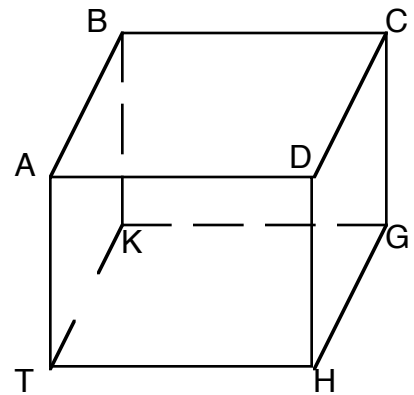
Objective To solve problems by drawing a diagram
 To identify the relationships between two lines of between two planes, and
 To name angles formed by a pair of lines and a transversal

Parallel Lines Two lines in a plane that never intersect

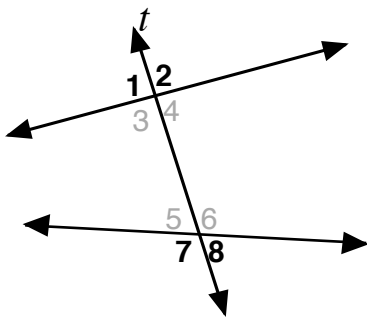
Skew Lines Two lines that do not intersect and are not in the same plane

Example

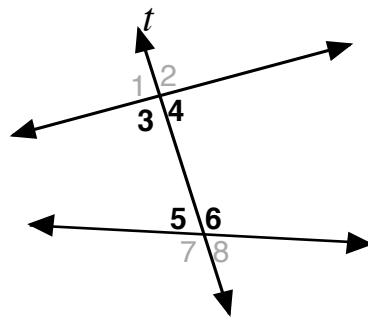
- Name all planes parallel to the plane ADH.
- Name all segments that intersect \overline{AT} .
- Name all segments that are parallel to \overline{AT} .
- Name all segments that are skew to \overline{AT} .



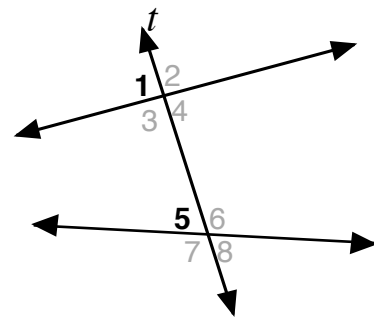
Transversal It is a line that intersects two or more coplanar lines at different points.



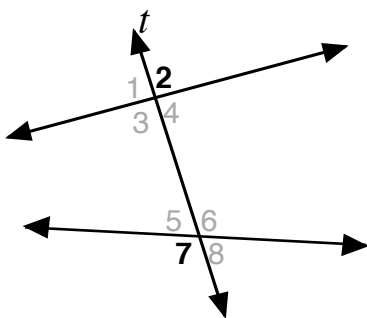
Exterior Angles
 $\angle 1$, $\angle 2$, $\angle 7$, and $\angle 8$



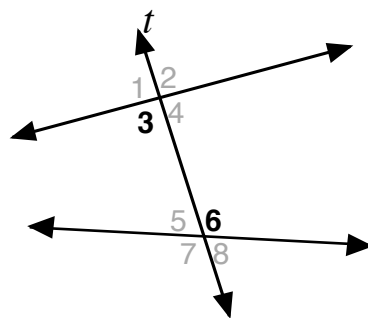
Interior Angles
 $\angle 3$, $\angle 4$, $\angle 5$, and $\angle 6$



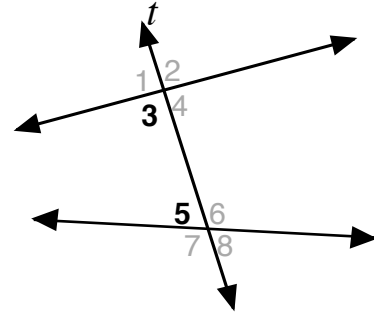
Corresponding Angles
 $\angle 1$ and $\angle 5$



Alternate Exterior Angles
 $\angle 2$ and $\angle 7$



Alternate Interior Angles
 $\angle 3$ and $\angle 6$



Consecutive Interior Angles
 $\angle 3$ and $\angle 5$
 aka: Same Side Interior Angles

Identify each pair of angles as alternate interior, alternate exterior, corresponding, or consecutive interior angles.

- a. $\angle 6$ and $\angle 8$
- b. $\angle 1$ and $\angle 11$
- c. $\angle 4$ and $\angle 10$
- d. $\angle 2$ and $\angle 12$
- e. $\angle 5$ and $\angle 7$
- f. $\angle 4$ and $\angle 11$
- g. Identify the transversal for $\angle 6$ and $\angle 8$.

