

When Parallel Lines Are Cut By a Transversal, What Angle Pair Relationships Exist?

Alternate Interior
 $\angle 2 \cong \angle 8$
 $\angle 3 \cong \angle 5$

Alternate interior angles are congruent.

Corresponding Angles
 $\angle 3 \cong \angle 7$ $\angle 1 \cong \angle 5$
 $\angle 4 \cong \angle 8$ $\angle 2 \cong \angle 6$

Corresponding angles are congruent.

Alternate Exterior
 $\angle 4 \cong \angle 6$
 $\angle 1 \cong \angle 7$

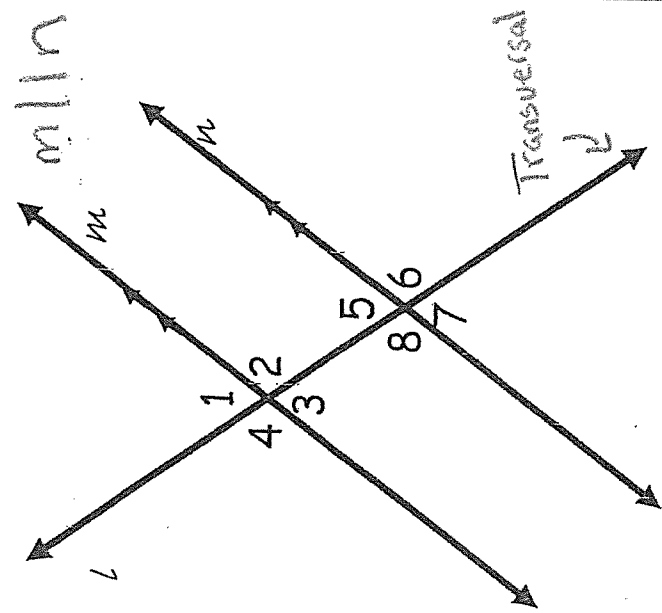
Alternate exterior angles are congruent.

Same Side Interior or Consecutive Interior
 $\angle 2$ and $\angle 5$
 $\angle 3$ and $\angle 8$

Same side interior or consecutive interior angles are supplementary.

Same Side Exterior or Consecutive Exterior
 $\angle 1$ and $\angle 6$
 $\angle 4$ and $\angle 7$

Same side exterior or consecutive exterior angles are supplementary.



Vertical Pair $\angle 1 \cong \angle 3$
 $\angle 2 \cong \angle 4$

Vertical angles are congruent.

Linear Pair $\angle 6$ and $\angle 7$
 $\angle 3$ and $\angle 4$ $\angle 6$ and $\angle 5$
 $\angle 1$ and $\angle 4$ $\angle 7$ and $\angle 8$ $\angle 5$ and $\angle 8$
 Linear pair of angles are supplementary.