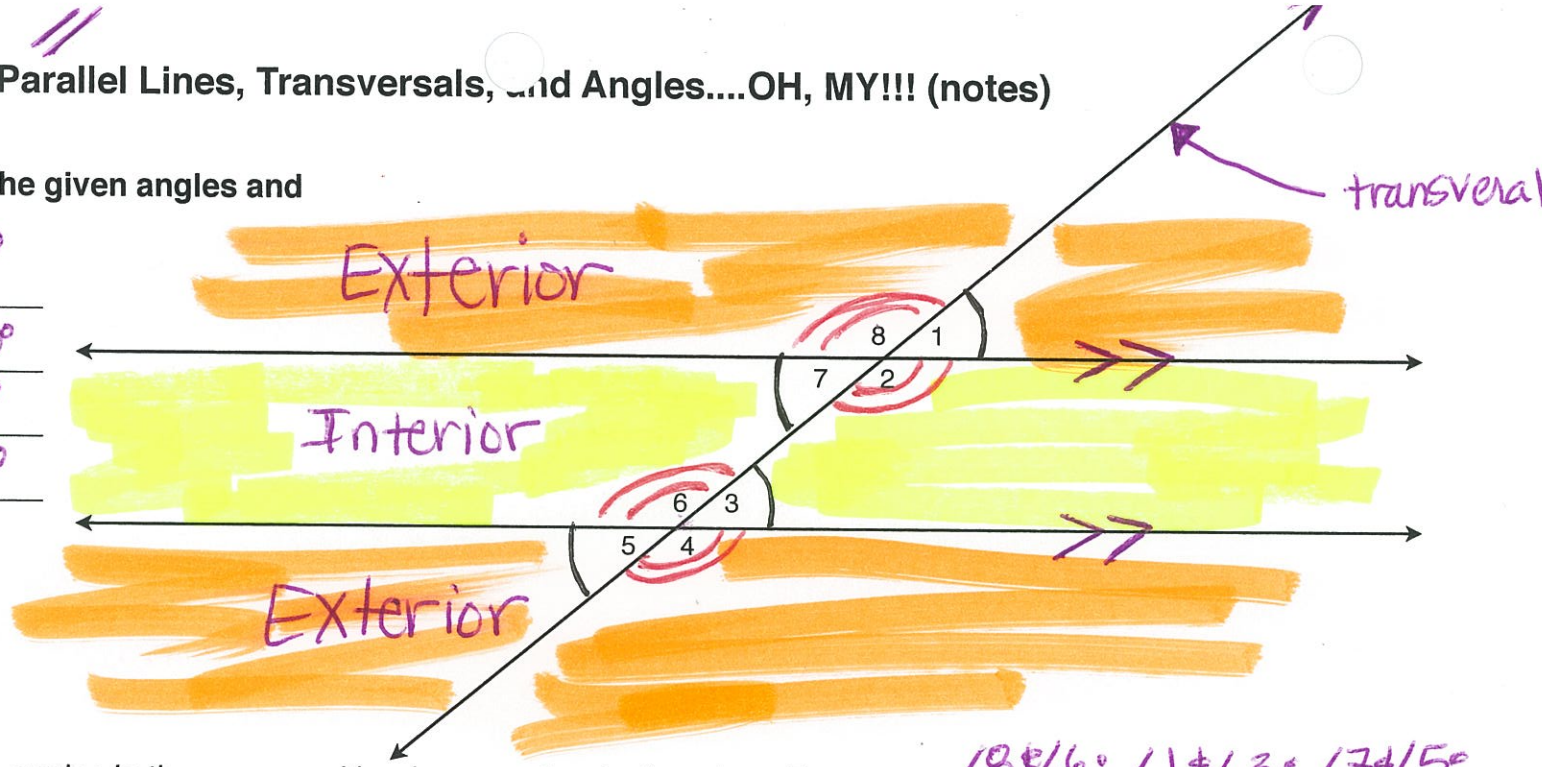


# Parallel Lines, Transversals, and Angles....OH, MY!!! (notes)

Using a protractor, measure the given angles and list their degrees on the line.

- |                        |                        |
|------------------------|------------------------|
| $\angle 1$ <u>40°</u>  | $\angle 5$ <u>40°</u>  |
| $\angle 2$ <u>140°</u> | $\angle 6$ <u>140°</u> |
| $\angle 3$ <u>40°</u>  | $\angle 7$ <u>40°</u>  |
| $\angle 4$ <u>140°</u> | $\angle 8$ <u>140°</u> |



## VOCABULARY:

**Corresponding Angles (CA):** angles in the same position from one line to the other. Examples:  $\angle 8 \cong \angle 6$ ;  $\angle 1 \cong \angle 3$ ;  $\angle 7 \cong \angle 5$ ;  $\angle 2 \cong \angle 4$   
 "match up" These angles are congruent to each other.

**Vertical Angles (VA):** opposite angles formed when two lines intersect. Examples:  $\angle 8 \cong \angle 2$ ;  $\angle 1 \cong \angle 7$ ;  $\angle 6 \cong \angle 4$ ;  $\angle 3 \cong \angle 5$   
 These angles are congruent to each other.

**Linear Pair:** 2 angles that make a straight line. Examples:  $\angle 1 \cong \angle 8$ ;  $\angle 8 \cong \angle 7$ ;  $\angle 7 \cong \angle 2$ ;  $\angle 2 \cong \angle 1$   
 must be adjacent These angles are supplementary = 180° to each other.

**Same Side Interior Angles (SSIA):** on same side of the transversal and on the inside of the parallel lines  
 Examples:  $\angle 7 \cong \angle 6$ ;  $\angle 2 \cong \angle 3$  These angles are supplementary to each other.

**Same Side Exterior Angles (SSEA):** on same side of the transversal and on the exterior of the parallel lines  
 Examples:  $\angle 8 \cong \angle 5$ ;  $\angle 1 \cong \angle 4$  These angles are supplementary to each other.

**Alternate Interior Angles (AIA):** on opposite sides of the transversal and on the inside of the parallel lines  
 Examples:  $\angle 7 \cong \angle 3$ ;  $\angle 2 \cong \angle 6$  These angles are congruent to each other.

**Alternate Exterior Angles (AEA):** on opposite sides of the transversal and on the exterior of the parallel lines  
 Examples:  $\angle 8 \cong \angle 4$ ;  $\angle 1 \cong \angle 5$  These angles are congruent to each other.