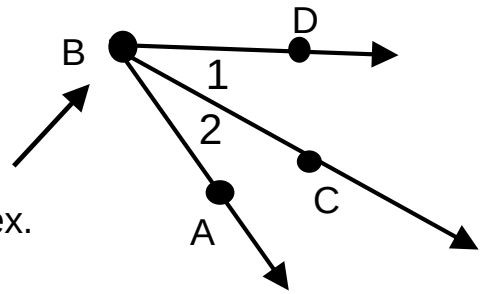
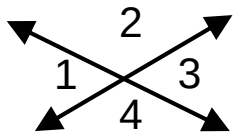
SM2 THEOREMS 7-3 (Special Angle Pairs)

Angle Addition Postulate: ***If*** $\angle ABC$ and $\angle CBD$ are adjacent angles, ***then*** $m\angle ABC + \angle CBD = \angle ABD$

$\angle ABC$ is adjacent to $\angle CBD$



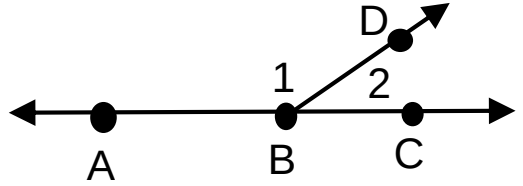


$\angle 1 \cong \angle 3$

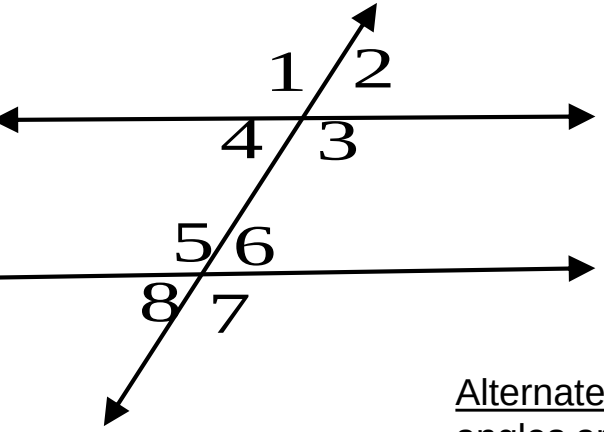
$\angle 2 \cong \angle 4$

Vertical Angle Pair Theorem: ***If*** two angles are vertical angles to each other, ***Then*** the two angles are congruent.

Linear Pair Theorem: ***If*** two angles form a linear pair ***then*** the they are supplementary (add up to 180).



$m\angle 1 + \angle 2 = 180$



Corresponding Angles Postulate: ***If*** two parallel lines are "cut" by a transversal, ***then*** corresponding angles are congruent.

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

Alternate Interior Angle Theorem: ***If*** two parallel lines are "cut" by a transversal, ***then*** alternate interior angles are congruent.

$\angle 4 \cong \angle 6$ $\angle 3 \cong \angle 5$

Alternate Exterior Angle Theorem: ***If*** two parallel lines are "cut" by a transversal, ***then*** alternate exterior angles are congruent.

$\angle 1 \cong \angle 7$ $\angle 2 \cong \angle 8$

Consecutive Interior Angle Theorem: ***If*** two parallel lines are "cut" by a transversal, ***then*** consecutive interior angles are supplementary.

$m\angle 4 + m\angle 5 = 180$ $m\angle 3 + m\angle 6 = 180$