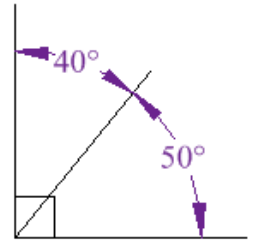# Angles

Complementary angles
Two Angles are Complementary when they add up to 90 degrees (a Right Angle).

Examples:
60° and 30° are complementary angles.
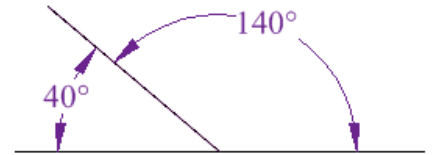5° and 85° are complementary angles.

Supplementary angles
These two angles (140° and 40°) are Supplementary Angles, because they add up to 180°:

Example:
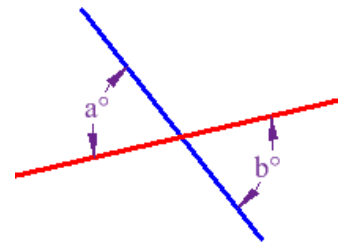60° and 120° are supplementary angles.

Vertically opposite angles
Vertically Opposite Angles are the angles opposite each other when two lines cross
"Vertical" in this case means they *share the same Vertex* (or corner point).
Example: ∠a and ∠b are vertically opposite angles.
Vertically opposite angles are congruent (equal)
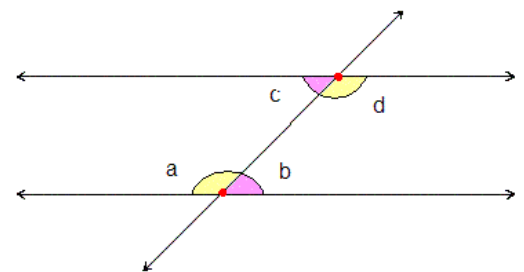$$∠a = ∠b$$

Alternate Interior angles
When two lines are crossed by another line (which is called the Transversal), the pairs of angles
• on opposite sides of the transversal
• but inside the two lines
are called Alternate Interior Angles.
Alternate Interior angles are congruent.
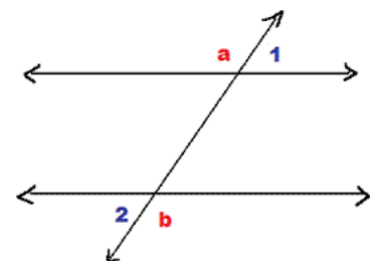Example: ∠c and ∠b are Alternate Interior angles.

Alternate Exterior angles
When two lines are crossed by another line (which is called the Transversal), the pairs of angles:
• on opposite sides of the transversal
• but outside the two lines
are called Alternate Exterior Angles.
Alternate Exterior angles are congruent.
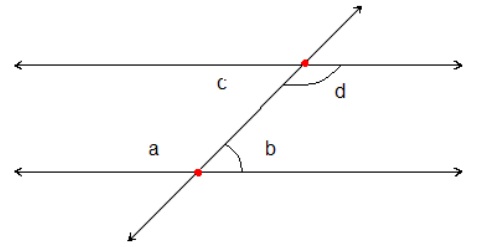Example: ∠a and ∠b are Alternate Exterior angles.

Co-interior angles.

The pairs of angles on one side of the transversal but inside the two lines are called Co-interior angles.

Sum of two Co-interior angles is equal to 180°.

Example: ∠d and ∠b are Co-interior angles.

Corresponding angles

The pair of angles on the same side of the transversal, one in the interior region and the other in the exterior region are called Corresponding angles.

Corresponding angles are congruent.

Example: ∠a and ∠c are corresponding angles.