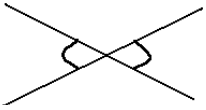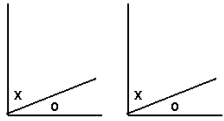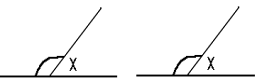# GEOMETRY THEOREMS...

- ## ANGLE THEOREMS:

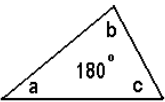**(OAT) Opposite Angle Theorem** ➔ If two lines intersect then the opposite angles are equal.

(CAT) Complementary Angle Theorem ➔ If two angles are equal, then their complements are equal.
Note: Complementary angles sum to $90°$.

(SAT) Supplementary Angle Theorem ➔ If two angles are equal, then their supplements are equal.
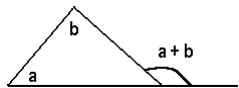*Note: Supplementary angles sum to $180°$.*

(SATT) Sum of the Angles of a Triangle Theorem ➔ The sum of the interior angles of a triangle is $180°$.

Note: When two angles of one triangle are respectively equal to two angles of another triangle, the third angles are equal.
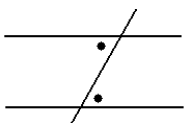
(ITT) Isosceles Triangle Theorem ➔ The angles opposite the equal sides are equal.
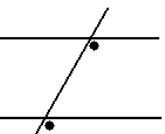*Note: Isosceles triangles have 2 equal sides.*

(EAT) Exterior Angle Theorem ➔ An exterior angle of a triangle is equal to the sum of the interior and non-adjacent angles.
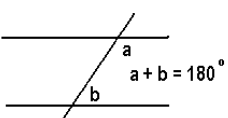
- ## TRANSVERSAL PARALLEL THEOREMS:

(AIA) Alternate Interior Angles ➔ When a transversal intersects a set of parallel lines, the alternate interior angles are equal.
Note: "Z" pattern

(CA) Corresponding Angles ➔ When a transversal intersects a set of parallel lines, the corresponding angles are equal.
Note: "F" pattern

(CIA) Co-Interior Angles ➔ When a transversal intersects a set of parallel lines, the co-interior angles sum to $180°$.
Note: "C" pattern