QUADRILATERAL

Is a Four sided Polygon, having 4 Edges(sides)

Derived from latin words "Quadri" a Variation of Four and "Lotus" meaning Side.

another name for it is "tetragon"

Derived from the Greek word "Tetra" meaning four and "Gon" meaning Corner or Angles

Properties of a Parallelogram

Consecutive Angles are Supplementary

Parallel Sides are Congruent

Opposite Angles are Congruent

Diagonals Bisect each other

Diagonals Bisect the Parallelogram into two Congruent Triangles

Diagonals are Congruent

PROVING THEOREMS and POSTULATES

VAT Vertical Angles Theorem	Vertical angles are Congruent
AAP Angle Addition Postulate	if three Sides of one Triangles are Congruent to the Corresponding parts of another. then triangles are Congruent
CPCTC	Corresponding Parts of Congruent Triangles are Congruent
LC Congruence Theorem	if the Leg of another Right Triangle is Congruent, then the two Right Triangles are Congruent

TRAPEZOID

Is a Quadrilateral in which are and only one pair of opposite sides are parallel

The Parallel sides of a trapezoid are called BASES

The Non-Parallel sides are Called LEGS

The pair of angles formed by a base and legs are called BASE ANGLES

if the LEGS of the Trapezoid are Congruent, then the Trapezoid is called an ISOSCELES TRAPEZOID

KINDS OF QUADRILATERAL

PARALLELOGRAM a quadrilateral with two pairs of parallel sides

RHOMBUS a quadrilateral with two pairs of congruent sides

RECTANGLE a quadrilateral with four right angles

SQUARE a quadrilateral with four congruent angles and sides

TRAPEZOID a quadrilateral with one pair of parallel sides

KITE a quadrilateral with two distinct pairs of consecutive sides that are congruent

SPECIAL PROPERTIES

Properties	Parall-elogram	Rectangle
Opposite Sides are Parallel	True	True
Opposite Angles are Congruent	True	True
Consecutive Angles are Supplementary	True	True
Diagonals Bisect each other	True	True
Either Diagonals form Two Congruent Triangles	True	True
Pairs of Opposite Sides are Congruent and Parallel	True	True
Opposite Sides are Congruent	True	True
Diagonals are perpendicular	False	False
Diagonals Bisect a pair of Opposite Angles	False	False
Diagonals are Congruent	False	True
Diagonals are Both Perpendicular and Congruent	False	False

ISOSCELES TRAPEZOID

an Isosceles Trapezoid features some special properties

Legs are Congruent

Base Angles are Congruent

Diagonals are Congruent

Median of Trapezoid

is a Segment which Joints the Mid Points of the Non-Parallel Sides.

It is Parallel to the Bases and has a Length equal to 1/2 the sum of the length of the bases

(Upper Base + Lower Base)/2