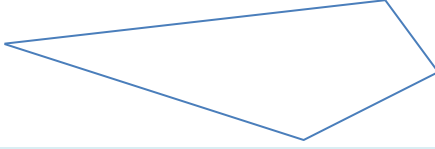


Quadrilaterals

S.no	Terms	Descriptions
1	Quadrilateral	A quadrilateral is the union of four line-segments determined by four distinct coplanar points of which no three are collinear and the line-segments intersect only at end points. For ABCD to be quadrilateral, following condition are required a) The four points A, B, C and D must be distinct and co-planar. b) No three of points A, B, C and D are co-linear. c) Line segments i.e. AB, BC, CD, DA intersect at their end points only.
		
<i>A quadrilateral is a four-sided polygon with four angles. There are many kinds of quadrilaterals. The five most common types are the parallelogram, the rectangle, the square, the trapezoid, and the rhombus.</i>		
2	Angle Property of Quadrilateral	1) Sum of all the interior angles is 360° 2) Sum of all the exterior angles is 360°

3 Parallelogram

A quadrilateral which has both pairs of opposite sides parallel is called a parallelogram.

Its properties are:

- The opposite sides of a parallelogram are equal.
- The opposite angles of a parallelogram are equal.
- The diagonals of a parallelogram bisect each other.
- The diagonal of a parallelogram divide into two congruent triangles



A quadrilateral is said to a parallelogram if Opposite sides are equal **OR** Opposite angles are equal **OR** Diagonal bisects each other **OR** A pair of opposite are parallel and equal

4 Trapezium

A quadrilateral which has one pair of opposite sides parallel is called a trapezium.



5 Rhombus

Rhombus is a parallelogram in which any pair of adjacent sides is equal.

Properties of a rhombus:

- All sides of a rhombus are equal
- The opposite angles of a rhombus are equal
- The diagonals of a rhombus bisect each other at right angles.



6	Rectangles	A parallelogram which has one of its angles a right angle is called a rectangle. Properties of a rectangle are: • The opposite sides of a rectangle are equal • Each angle of a rectangle is a right-angle. • The diagonals of a rectangle are equal. • The diagonals of a rectangle bisect each other. 
7	Square	A quadrilateral, all of whose sides are equal and all of whose angles are right angles. Properties of square are: • All the sides of a square are equal. • Each of the angles measures 90°. • The diagonals of a square bisect each other at right angles. The diagonals of a square are equal. 
8	Important points about quadrilaterals	a) A square is always a parallelogram. b) A square is always a rectangle. c) A rhombus can be square. e) A rectangle has four right angles.
9	Mid-point Theorems for Triangles	1) The line segment joining the mid points of the two sides of the triangle is parallel to the third side 2) A line drawn through mid-point of one side of a triangle and parallel to another side bisect the third side of the triangle