| 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<br>a) The four points A, B, C and D must be distinct and co-planar.<br>b) No three of points A, B, C and D are co-linear.<br>c) Line segments i.e. AB, BC, CD, DA intersect at their end points only. |
| | | *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.* |
| 2 | Angle Property of Quadrilateral | 1) Sum of all the interior angles is $360^0$<br>2) Sum of all the exterior angles is $360^0$ |

| 3 | Parallelogram | A quadrilateral which has both pairs of opposite sides parallel is called a parallelogram.<br><br>Its properties are:<br>• The opposite sides of a parallelogram are equal.<br>• The opposite angles of a parallelogram are equal.<br>• The diagonals of a parallelogram bisect each other.<br>• The diagonal of a parallelogram divide into two congruent triangles<br><br>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.<br><br>Properties of a rhombus:<br>• All sides of a rhombus are equal<br>• The opposite angles of a rhombus are equal<br>• 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.<br>Properties of a rectangle are:<br>• The opposite sides of a rectangle are equal<br>• Each angle of a rectangle is a right-angle.<br>• The diagonals of a rectangle are equal.<br>• 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.<br>Properties of square are:<br>• All the sides of a square are equal.<br>• Each of the angles measures 90°.<br>• The diagonals of a square bisect each other at right angles.<br>The diagonals of a square are equal. |
| 8 | Important points about quadrilaterals | a) A square is always a parallelogram.<br>b) A square is always a rectangle.<br>c) A rhombus can be square.<br>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<br><br>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 |