

Basic Concepts

1. Sum of the angles of a quadrilateral is 360° .
2. A diagonal of a parallelogram divides it into two congruent triangles.
3. In a parallelogram,
 - (i) opposite sides are equal
 - (ii) opposite angles are equal
 - (iii) diagonals bisect each other
4. A quadrilateral is a parallelogram, if
 - (i) opposite sides are equal or
 - (ii) opposite angles are equal or
 - (iii) diagonals bisect each other or
 - (iv) A pair of opposite sides is equal and parallel
5. Diagonals of a rectangle bisect each other and are equal and vice – versa.
6. Diagonals of a rhombus bisect each other at right angles and vice – versa.
7. Diagonals of a square bisect each other at right angles and are equal, and vice – versa.
8. The line segment joining the mid – points of any two sides of a triangle is parallel to the third side and is half of it.
9. A line through the mid – point of a side of a triangle parallel to another side bisects the third side.
10. The quadrilateral formed by joining the mid – points of the sides of a quadrilateral, in order, is a parallelogram.
11. The quadrilateral formed by joining the mid – points of the sides of a rectangle, in order, is a rhombus.
12. The quadrilateral formed by joining the mid – points of the sides of a rhombus, in order, is a rectangle.
13. The quadrilateral formed by joining the mid – points of the sides of a square, in order, is a square.