

# Parallelogram

### Identify the conditions that need to be satisfied for a quadrilateral to be a parallelogram.

1. If the opposite sides of a quadrilateral are equal, then it is a parallelogram.



2. If the opposite angles of a quadrilateral are equal, then it is a parallelogram.



3. If the diagonals of a quadrilateral bisect each other, then it is a parallelogram.



4. In a quadrilateral, if a pair of opposite sides is equal and parallel, then the quadrilateral is a parallelogram.



• Complete all the questions of the **Exercise 17.1 on pages 173,174,175** of the Mathematics Text Book

# Parallelograms with special properties

#### Rectangle

(i) All the vertex angles are right angles.

(ii) The diagonals are equal in length.

### Square

- (i) All the sides are equal in length.
- (ii) The diagonals bisect each other at right angles.
- (iii) The angles at the vertices are bisected by the diagonals.

## Rhombus

- (i) All the sides are equal in length.
- (ii) The diagonals bisect each other at right angles.
- (iii) The angles at the vertices are bisected by the diagonals