



## Kinds of Quadrilaterals

### A. Choose the Correct Answer:

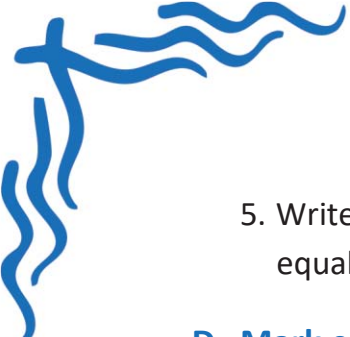
1. Which of the following quadrilaterals has all sides equal and all angles equal?
  - a) Rhombus
  - b) Rectangle
  - c) Square
  - d) Parallelogram
2. Which quadrilateral has only one pair of parallel sides?
  - a) Trapezium
  - b) Rhombus
  - c) Square
  - d) Parallelogram
3. Which of the following is not necessarily true for a parallelogram?
  - a) Opposite sides are equal
  - b) Diagonals bisect each other at right angles
  - c) Opposite angles are equal
  - d) Adjacent angles are supplementary

### B. Write the Missing Terms to Complete the Sentences:

1. A \_\_\_\_\_ is a quadrilateral with both pairs of opposite sides parallel.
2. A \_\_\_\_\_ has four equal sides but does not necessarily have right angles.
3. A trapezium has only \_\_\_\_\_ pair of parallel sides.
4. In a rectangle, the diagonals are \_\_\_\_\_ and \_\_\_\_\_ each other.
5. A kite has two distinct pairs of \_\_\_\_\_ adjacent sides.

### C. Figure out the answers to these questions:

1. Draw and label the following quadrilaterals: square, rhombus, rectangle, trapezium, and kite. Mention one key property of each.
2. Compare and contrast a rhombus and a square in terms of their sides, angles, and diagonals.
3. A quadrilateral has opposite sides equal and one angle of  $90^\circ$ . Can it be a square? Justify.
4. Name a real-life object for each of the following shapes: rectangle, square, trapezium, and kite.

- 
5. Write the names of all quadrilaterals that have both pairs of opposite sides equal and parallel.

**D. Mark each sentence with a True (✓) or False (✗):**

1. All rectangles are parallelograms, but all parallelograms are not rectangles.
2. A kite always has both pairs of opposite sides equal.
3. A square is both a rectangle and a rhombus.
4. Trapeziums never have parallel sides.
5. A rhombus has all angles equal to  $90^\circ$ .

☐  
☐  
☐  
☐  
☐

**E. Challenge yourself with these questions:**

1. Draw a flowchart to classify different types of quadrilaterals based on sides and angles.
2. Find the quadrilateral based on the clues: all angles are  $90^\circ$ , opposite sides are equal, and diagonals are equal but not all sides are the same.
3. Create a table listing properties of square, rectangle, parallelogram, rhombus, trapezium, and kite. Include columns for sides, angles, and diagonals.
4. Look around your home or classroom and list five objects that resemble different quadrilaterals.
5. You are designing a kite. Which type of quadrilateral would best fit its structure? Explain your choice.