Quadrilateral

# A. Choose the Correct Answer:

- 1. Which of the following is always true for all quadrilaterals?
  - a) All sides are equal
  - b) All angles are right angles
  - c) Sum of interior angles is 360°
  - d) Opposite angles are equal
- 2. A quadrilateral with both pairs of opposite sides parallel is called a:
  - a) Trapezium
  - b) Kite
  - c) Parallelogram
  - d) Rhombus
- 3. Which of the following quadrilaterals always has diagonals that bisect each other at right angles?
  - a) Rectangle
  - b) Square
  - c) Trapezium
  - d) Parallelogram

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

- 1. A quadrilateral has \_\_\_\_\_\_ sides and \_\_\_\_\_\_ angles.
- 2. A \_\_\_\_\_\_ is a quadrilateral with exactly one pair of parallel sides.
- 3. The sum of the interior angles of a quadrilateral is always \_\_\_\_\_ degrees.
- 4. A square has \_\_\_\_\_\_ equal sides and all angles are \_\_\_\_\_\_ degrees.
- 5. The diagonals of a rhombus are \_\_\_\_\_ and bisect each other at \_\_\_\_\_ angles.

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

- 1. Draw a rough sketch of a kite and label all its properties.
- 2. Classify the following shapes into quadrilaterals and non-quadrilaterals: triangle, square, trapezium, pentagon, and rhombus.
- 3. If one angle of a quadrilateral is 90°, and the other three are equal, find the measure of each of the equal angles.

- 4. Identify the quadrilateral whose diagonals are equal and bisect each other. Explain why.
- 5. A parallelogram has one angle of 60°. Without using protractor, find all the other angles. Justify your reasoning.

# D. Mark each sentence with a True (✔) or False (★):

- 1. A quadrilateral can have three right angles.
- 2. The diagonals of a rectangle are always equal.
- 3. A square is also a parallelogram.
- 4. A trapezium has two pairs of parallel sides.
- 5. The sum of exterior angles of any quadrilateral is 360°.

## E. Challenge yourself with these questions:

1. Create a table to compare the properties of square, rectangle, rhombus, and parallelogram.

- 2. Name a real-life object shaped like a trapezium and explain how you identified it.
- 3. Make a quadrilateral using matchsticks where no sides are equal. Name the type of quadrilateral formed.
- 4. Can a quadrilateral have all angles less than 90°? Justify your answer.
- 5. If one angle of a parallelogram is 75°, find all the other three angles with proper steps.