Mathematics — Ganita Manjari

Chapter 12 Test 1

Quadrilaterals

Class IX | 2026–27

Time Allowed: 45 Minutes | Maximum Marks: 25

General Instructions

1. All 13 questions are compulsory. Choose one option in A; show working in B–D.
2. No calculators. Give exact answers unless an approximation is requested.
3. Figures are not necessarily to scale. Give reasons for geometrical conclusions.

SECTION A

(5 questions × 1 mark = 5 marks)

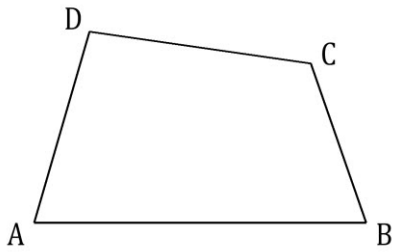
1. The four vertices of a quadrilateral studied in this chapter must be:

(A) On one straight line
(B) In one plane
(C) Equally spaced
(D) On two perpendicular lines

2. In quadrilateral PQRS, which sides are adjacent to PQ?

(A) QR and RS
(B) RS and SP
(C) QR and SP
(D) PR and QS

3. Which name traces the boundary in figure correctly?



(A) BCDA
(B) ABDC
(C) ACBD
(D) ADBC

4. A diagonal of a quadrilateral joins:

(A) Adjacent vertices
(B) Midpoints of two sides
(C) A vertex to any side
(D) Opposite vertices

5. Which list can give the internal angles of a convex quadrilateral?

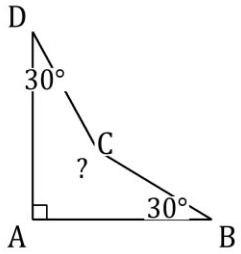
(A) 90°, 90°, 90°, 100°
(B) 60°, 80°, 100°, 120°
(C) 20°, 50°, 70°, 220°
(D) 40°, 60°, 80°, 180°

SECTION B

(4 questions × 2 marks = 8 marks)

6. Four distinct coplanar points are not all collinear. They are joined in a closed order. State two further checks needed for an ordinary quadrilateral.

7. Find the reflex internal angle at C in figure. State whether the quadrilateral is convex.



8. Can a quadrilateral have two reflex internal angles? Justify.

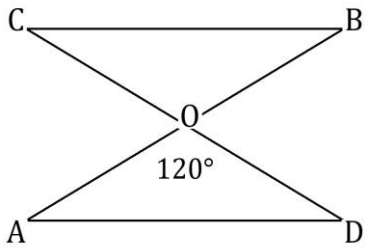
9. Define opposite sides and opposite angles without using vertex names. How many pairs of opposite sides does a quadrilateral have?

SECTION C

(3 questions × 3 marks = 9 marks)

10. Explain, using one diagonal, why the internal angles of a convex quadrilateral total 360°.

11. In figure, AB and CD cross at O. Find the sum of the smaller angles at A, B, C and D. Explain why the usual 360° rule does not apply.



12. The extended diagonals of a non-convex quadrilateral meet. A student concludes it is convex. Identify the error and state both correct tests for convexity.

SECTION D

(1 application question × 3 marks = 3 marks)

13. A park ABCD has sides AB = 18 m, BC = 13 m, CD = 16 m and DA = 11 m. AB is left open; the other sides are fenced at ₹75 per metre. (i) Name the two diagonals. (ii) Find the fencing length. (iii) Find the cost.