

## Worksheet: Quadrilaterals

Telangana State Board · Class 9 · Mathematics · 12 questions · 27 marks

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 27

**Q1.** Three angles of a quadrilateral are  $80^\circ$ ,  $100^\circ$ ,  $110^\circ$ . Find the fourth. [1 mark]

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**Q2.** Name the quadrilateral whose diagonals are equal AND bisect each other at right angles. [1 mark]

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**Q3.** In parallelogram ABCD,  $A = 75^\circ$ . Find C. [1 mark]

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**Q4.** In parallelogram ABCD,  $A = 70^\circ$ . Find B. [1 mark]

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**Q5.** In  $\triangle ABC$ , D and E are midpoints of AB and AC respectively. If  $BC = 10$  cm, find DE. [1 mark]

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**Q6.** A rhombus has diagonals 16 cm and 30 cm. Find each side. [2 marks]

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**Q7.** In rectangle ABCD, AC and BD are diagonals. If  $AC = 26$  cm and  $AB = 10$  cm, find BC. [2 marks]

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**Q8.** In quadrilateral ABCD,  $AB = CD$  and  $AB \parallel CD$ . Show that ABCD is a parallelogram. *[3 marks]*

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**Q9.** In  $\triangle ABC$ , P, Q, R are midpoints of BC, CA, AB respectively. Show that PQR (where S is... actually a simpler version) — Show that  $\triangle PQR$  has each side equal to half of one side of  $\triangle ABC$ . *[3 marks]*

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**Q10.** Prove that the diagonals of a rhombus bisect each other at right angles. *[4 marks]*

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**Q11.** In  $\triangle PQR$ , S is the midpoint of PQ. A line through S parallel to QR meets PR at T. Prove that T is the midpoint of PR. *[4 marks]*

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**Q12.** Prove: in any quadrilateral, the midpoints of the four sides form a parallelogram. *[4 marks]*

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