

Worksheet: Quadrilaterals

NIOS · Class 9 · Mathematics · 12 questions · 27 marks

Name: _____ Date: _____ Score: _____ / 27

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

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

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

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

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

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

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

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

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]

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

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]

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