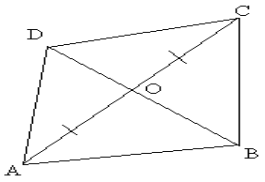
Comprehensive Test Series-03
Quadrilaterals
IX

TIME: 1 hr. **MM: 25**

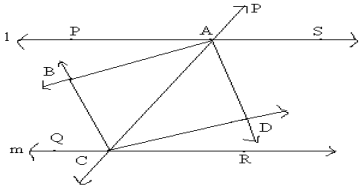
General Instructions:

- All Questions are compulsory.
- Each question carries 3 marks
- Use of calculator is not permitted.

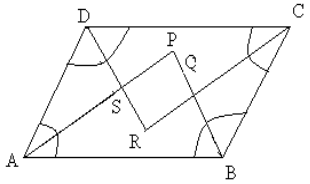
Q.1 Show that the diagonals of a rhombus are perpendicular to each other.



Q.2 Two parallel lines l and m intersected by a transversal p . Show that the quadrilateral formed by the bisectors of interior angles is a rectangle.



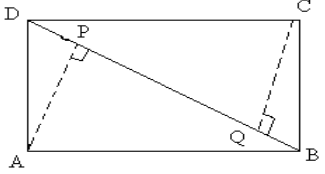
Q.3 Show that the bisectors of angles of a parallelogram form a rectangle.



Q.4 The angles of quadrilateral are in the ratio 3: 5: 9: 13, find all the angles of the quadrilateral.

Q.5 Show that the diagonals of a square are equal and bisect each other at right angles.

Q.6 ABCD is a parallelogram and AP and CQ are perpendiculars from vertices A and C on diagonal BD. Show that (i) Δ APB $\cong$ Δ CQD (ii) AP = CQ



Q.7 The line segment joining the mid-points of two sides of a triangle is parallel to the third side and half of it.

Q.8 ABC is a triangle right angled at C. A line through the mid- point M of hypotenuse AB and parallel to BC intersects AC at D Show that (i) D is the mid point of AC (ii) MD $\perp$ AC (iii) CM = MA = $\frac{1}{2}$ AB