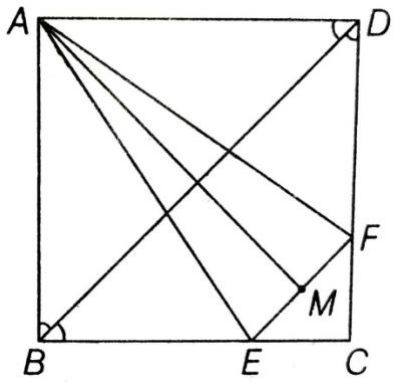
QUADRILATERALS

1.In the given figure, ABCD is a square and EF||BD. M is the mid-point of EF. Prove that AM bisects angle BAD.



2. The diagonals of a quadrilateral ABCD are perpendicular to each other show that the quadrilateral formed by joining the midpoints of its sides is the rectangle.

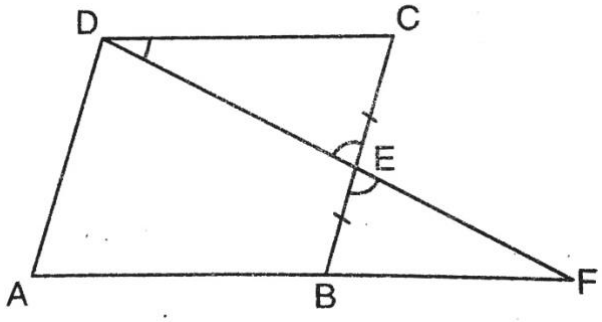
3. ABCD is a parallelogram if the bisectors of DP and CP of angles d&c meet at P on a b then show that P is the midpoint of AB.

4. Show that the diagonals of a square are equal and bisect each other at right angle.

5.ABCD is a rhombus and P, Q, R and S are the mid-points of sides AB, BC, CD and DA respectively. Show that the quadrilateral PQRS is a rectangle.

6.Prove that the quadrilateral formed (if possible) by the internal angle bisectors of any quadrilateral is cyclic.

7.In the figure, ABCD is a parallelogram and E is the mid-point of side BC. DE and AB on producing meet at F. Prove that AF = 2AB.



8. Two l and M are intersected by a transversal t. show that the quadrilateral formed by the bisector of interior angles is a rectangle.

9. Show that the bisectors of angles of a parallelogram form a rectangle.

10. ABC is a triangle right angled at C . A line through the mid point M of hypotenuse AB and parallel to BC intersect AC at D. Show that

(a) D is mid point of AC.

(b) MD is perpendicular to AC

(c) CM= MA= ½ AB.