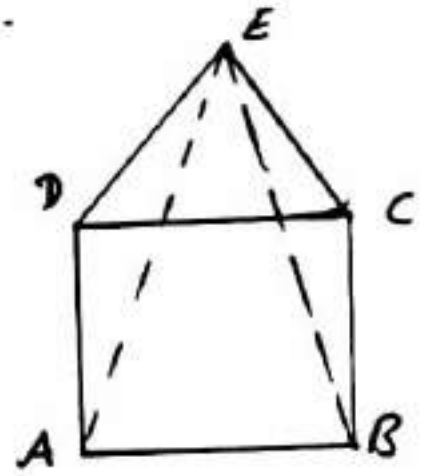
G. N. National Public School, Gorakhnath, GKP.

Class - IX MATHS Chapter - 8 Quadrilaterals

Assignment Part - 2

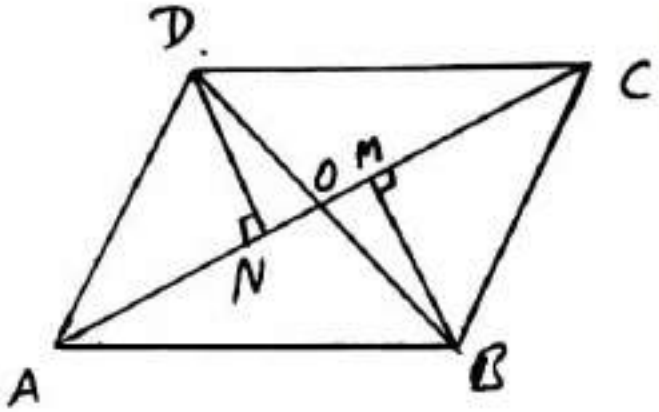
Q.9 In the adjoining figure, ABCD is a square and $\triangle EDC$ is an equilateral triangle. Prove that

(i) $AE = BE$ (ii) $\angle DAE = 15^\circ$



Q-10

In the adjoining figure, $BM \perp AC$ and $DN \perp AC$. If $BM = DN$. Prove that AC bisects BD.



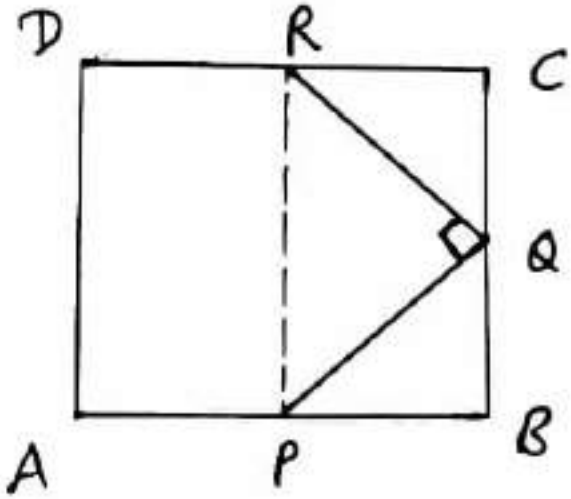
Q-11

In the given figure, ABCD is a square and $\angle PQR = 90^\circ$. If PB = QC = DR, prove that

(i) $QB = RC$

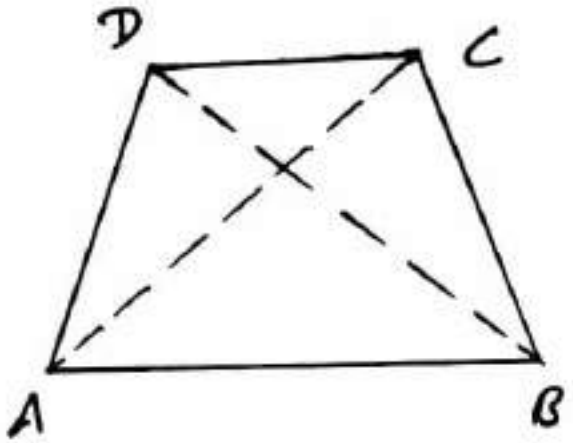
(ii) $PQ = QR$

(iii) $\angle QPR = 45^\circ$



CR-8, Quadrilaterals, Assignment Part - 3

Q.12 In the adjoining figure, ABCD is a quadrilateral in which AB is the longest side and CD is the shortest side.



Prove that

(i) $\angle C > \angle A$

(ii) $\angle D > \angle B$

Q-13 In the adjoining figure, the bisectors of $\angle B$ and $\angle D$ of a quadrilateral ABCD meet CD and AB produced at P and Q respectively.

Prove that

$$\angle P + \angle Q = \frac{1}{2}(\angle B + \angle D)$$