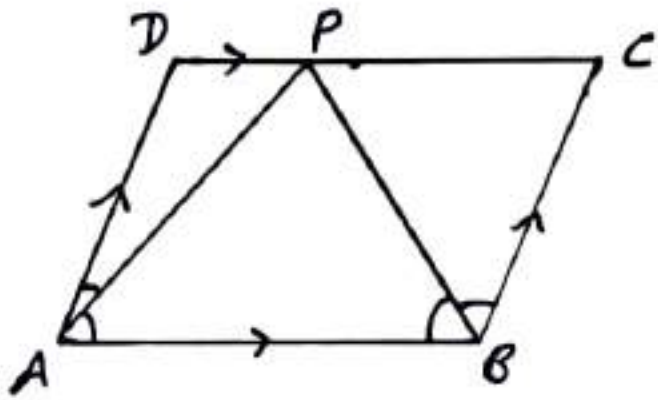
G. N. National Public School, Gorakhnath, GKP.

Class- IX MATHS CHAPTER-8 Quadrilaterals

Assignment Part-4

Q.14. In the adjoining figure, ABCD is a parallelogram in which $\angle A = 60°$. If the bisectors of $\angle A$ and $\angle B$ meet DC at P.

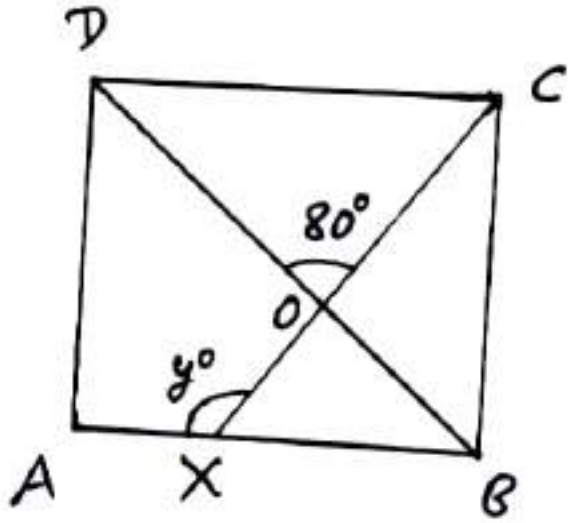


Prove that

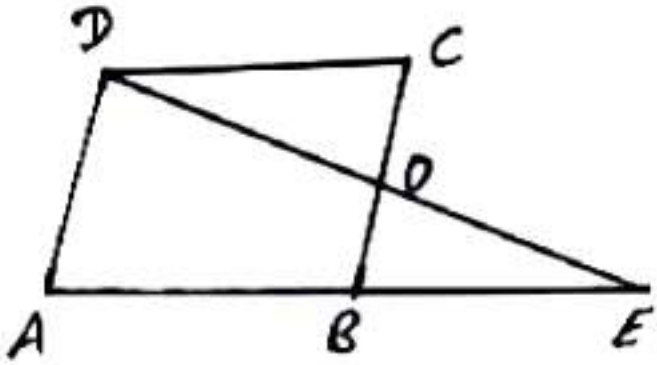
(i) $\angle APB = 90°$ (ii) $AD = DP$ and $PB = PC = BC$

(iii) $DC = 2AD$

Q.15 In the adjoining figure, ABCD is a square. A line segment CX cuts AB at X and the diagonal BD at O such that $\angle COD = 80°$ and $\angle OXA = y°$. Find the value of y.

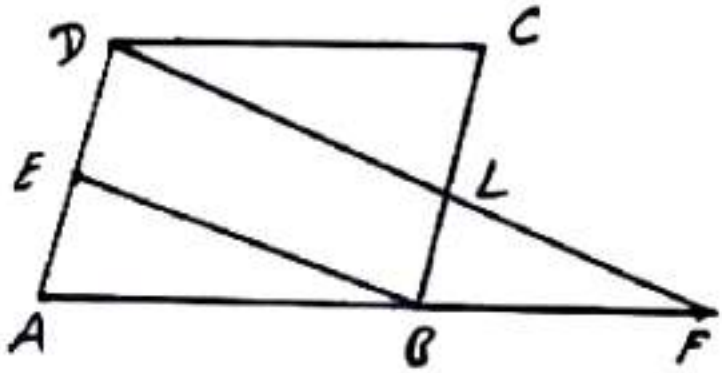


Q-16 In the adjoining figure, ABCD is a parallelogram in which AB is produced to E so that BE = AB.



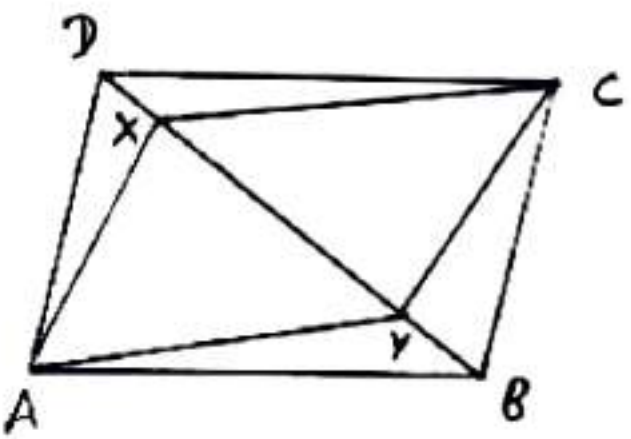
Prove that ED bisects BC.

Q.17 In the adjoining figure, ABCD is a parallelogram and E is the midpoint of AD. A line through D, drawn parallel to EB, meets AB produced at F and BC at L. Prove that



(i) AF = 2 DC (ii) DF = 2 DL

Q.18 In the adjoining figure, ABCD is a parallelogram and X, Y are the points on the diagonal BD such that DX = BY. Prove that



(i) CXAY is a parallelogram.

(ii) $\triangle ADX \cong \triangle CBY$ and $\triangle ABY \cong \triangle CDX$.

(iii) AX = CY and CX = AY.