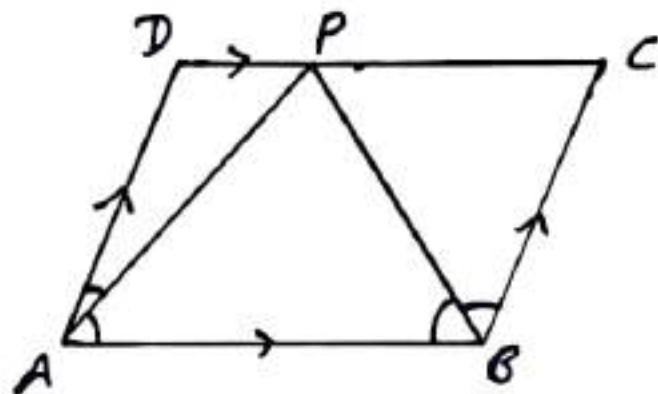


Class-IX MATHS CHAPTER-8 Quadrilaterals
Assignment Part-4

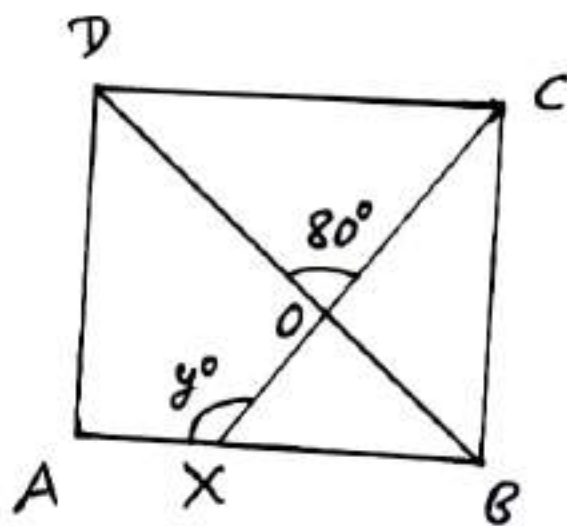
Q.14. In the adjoining figure, $ABCD$ is a parallelogram in which $\angle A = 60^\circ$. If the bisectors of $\angle A$ and $\angle B$ meet DC at P .



Prove that

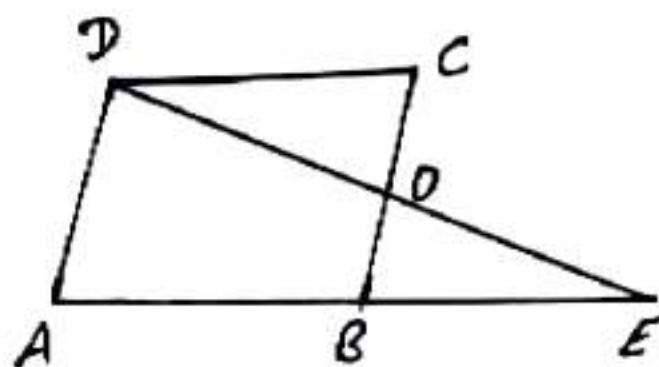
- (i) $\angle APB = 90^\circ$ (ii) $AD = DP$ and $PB = PC = BC$
(iii) $DC = 2AD$

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 $\angle COD = 80^\circ$ and $\angle OXA = y^\circ$. Find the value of y .



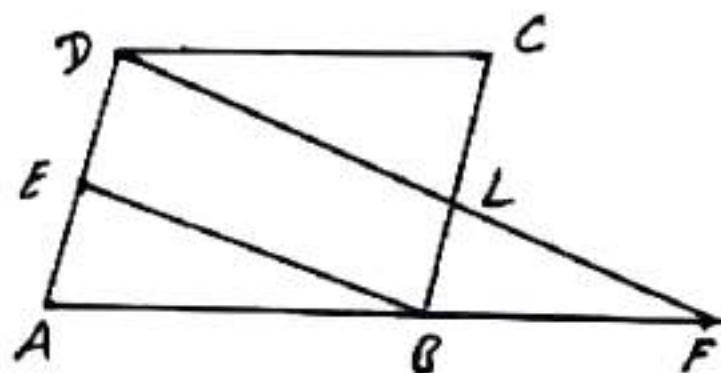
CR-8 Quadrilaterals Assignment Part - 5

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



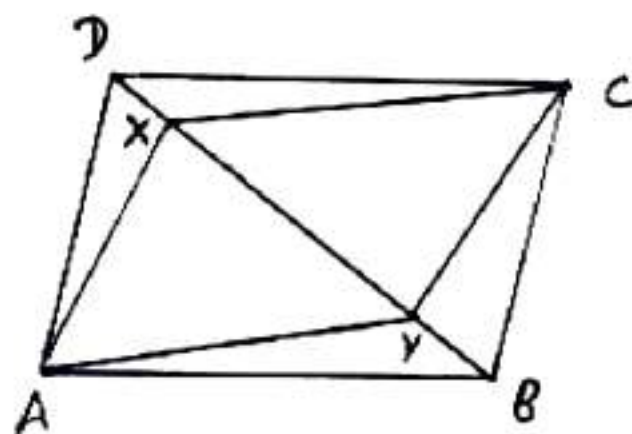
Prove that ED bisects BC .

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

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 $CX = AY$.