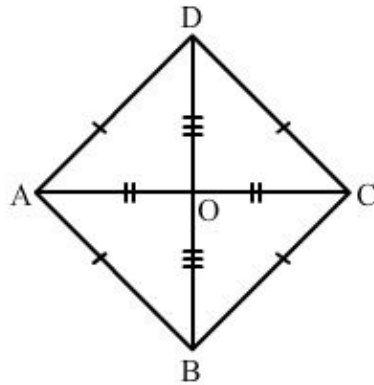




Understanding shapes-III special types of quadrilaterals Ex 17.2 Q11

**Answer :**



(i) Yes

In  $\triangle BCO$  and  $\triangle DCO$  :

$OC = OC$  (common)

$BC = DC$  (all sides of a rhombus are equal)

$BO = OD$  (diagonals of a rhombus bisect each other)

By SSS congruence :

$\triangle BCO \cong \triangle DCO$

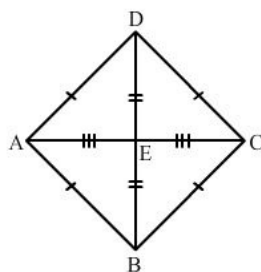
(ii) Yes

By c.p.c.t:

$\angle BCO = \angle DCO$

Understanding shapes-III special types of quadrilaterals Ex 17.2 Q12

**Answer :**



In  $\triangle AED$  and  $\triangle DEC$  :

$AE = EC$  (diagonals bisect each other)

$AD = DC$  (sides are equal)

$DE = DE$  (common)

By SSS congruence :

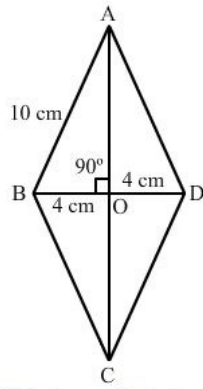
$\triangle AED \cong \triangle CED$

$\angle ADE = \angle CDE$  (c.p.c.t)

Similarly, we can prove  $\triangle AEB$  and  $\triangle BEC$ ,  $\triangle BEC$  and  $\triangle DEC$ ,  $\triangle AED$  and  $\triangle AEB$  are congruent to each other.

Hence, diagonal of a rhombus bisects the angle through which it passes.

Answer :



We know that the diagonals of a rhombus bisect each other at right angles.

$$\therefore BO = \frac{1}{2} BD = \left( \frac{1}{2} \times 16 \right) \text{ cm}$$

$$= 8 \text{ cm}$$

$$AB = 10 \text{ cm and } \angle AOB = 90^\circ$$

From right  $\triangle OAB$  :

\*\*\*\*\* END \*\*\*\*\*