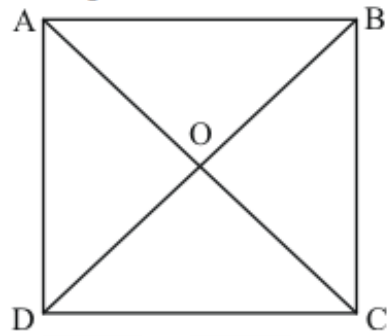




Quadrilaterals Ex 14.3 Q3

**Answer :**

The figure can be drawn as follows:



In  $\triangle AOB$  and  $\triangle AOD$ ,

$AB = AD$  (Sides of a square are equal)

$OB = OD$  (Diagonals of a parallelogram bisect each other)

$AO = AO$  (Common)

So, by SSS Congruence rule, we have

$\triangle AOB \cong \triangle AOD$

Also,

$\angle AOB = \angle AOD$  (Corresponding parts of congruent triangles are equal)

But,  $\angle AOB + \angle AOD = 180^\circ$  (Linear pairs)

We have,  $\angle AOB = \angle AOD$

$\angle AOB + \angle AOB = 180^\circ$

$2\angle AOB = 180^\circ$

$\angle AOB = \boxed{90^\circ}$

Hence, the required measure of  $\angle AOB$  is  $\boxed{90^\circ}$ .

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