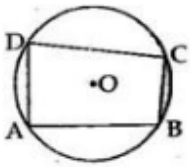
Exercise 11C

Question 19:

Let ABCD be a cyclic quadrilateral and let O be the centre of the circle passing through A, B, C, D.

Then each of AB, BC, CD and DA being a chord of the circle, its right bisector must pass through O.

∴ the right bisectors of AB, BC, CD and DA pass through and are concurrent.



Question 20:

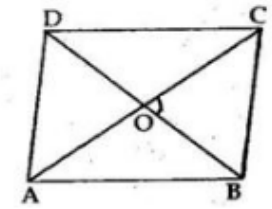
ABCD is a rhombus.

Let the diagonals AC and BD of the rhombus ABCD intersect at O.

But, we know, that the diagonals of a rhombus bisect each other at right angles.

So, $\angle BOC = 90°$

∴ $\angle BOC$ lies in a circle.



Thus the circle drawn with BC as diameter will pass through O

Similarly, all the circles described with AB, AD and CD as diameters will pass through O.

********** END **********