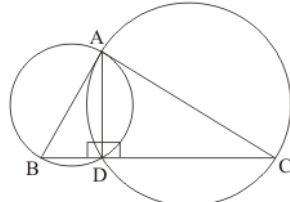




Circles Ex 16.5 Q24

Answer :

We have to prove that the circles on any two sides as diameter intersect each other on third side.



Let ABC be a triangle, where AD is perpendicular to BC. That is,

$$\angle BDA = \angle ADC = 90^\circ$$

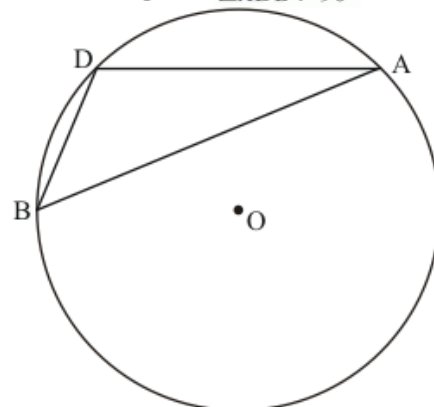
So, circles described on AB and AC pass through a point D on BC

Hence, the circles on any two sides as diameter intersect each other on third side.

Circles Ex 16.5 Q25

Answer :

We have to prove $\angle ADB > 90^\circ$



Construction: - draw a circle having center O and A , D and B point on Circumference and AB is not passing through the center

$$\text{So } \angle ADB = \frac{1}{2} \text{ reflex } \angle AOB > \frac{1}{2} (180^\circ)$$

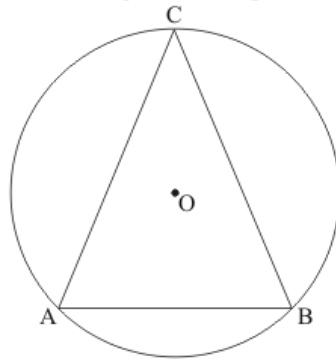
$$\angle ADB > 90^\circ$$

Hence $\boxed{\angle ADB > 90^\circ}$ Proved.

Circles Ex 16.5 Q26

Answer :

We have to prove that angle form by segment is greater than semi circle angle



Let O is the center of circle and AB is a chord.

So,

$$\angle ACB = \frac{1}{2} \angle AOB < \frac{1}{2} (180^\circ) < 90^\circ$$

$$\Rightarrow \angle ACB < 90^\circ$$

Hence

$$\boxed{\angle ACB < 90^\circ}$$

***** END *****