

⑨ $\angle OBA = 90^\circ$ [angle between radius and tangent]

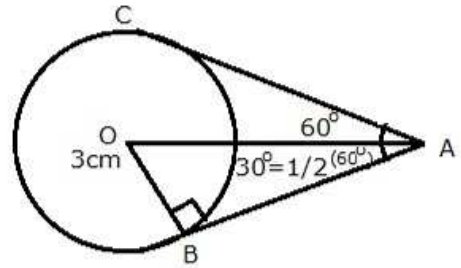
In rt $\triangle OBA$

$$\tan 30^\circ = \frac{OB}{AB}$$

$$\frac{1}{\sqrt{3}} = \frac{3}{AB}$$

$$\Rightarrow AB = 3\sqrt{3}$$

$\therefore AC = AB = 3\sqrt{3}$ [tangents from same external pt.]



⑩ $\angle OAR = 90^\circ$ [angle between radius and tangent]

$$\angle BAD = \angle OAR - \angle OAB$$

$$= 90^\circ - 70^\circ$$

$$= 20^\circ$$

Similarly $\angle ABD = 20^\circ$

$$\angle AAB = 20^\circ + 20^\circ$$

$$= 40^\circ \text{ (B)}$$

