

Question 5. ABC is an acute-angled triangle with circumcentre O orthocentre H . If $AO = AH$, then find the angle A .

Solution. $OA = HA$

$$\begin{aligned} R &= 2R \cos A \\ \Rightarrow \cos A &= \frac{1}{2} \Rightarrow A = \frac{\pi}{3} \end{aligned}$$