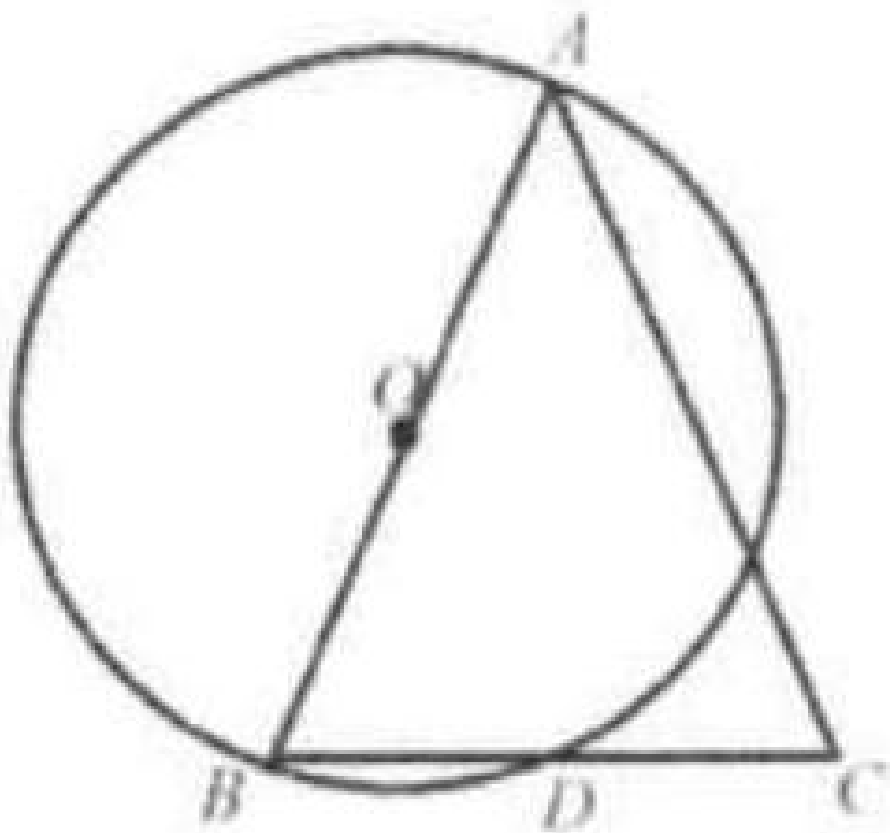


Example 1

ABC is an isosceles triangle with $AB = AC$. Circle O is drawn using AB as the diameter to intersect BC at D . Show that $BD = DC$.

Solution: Connect AD .

Since AB is the diameter, $\angle BDA = 90^\circ$. So



$$AD \perp BC.$$

Since $AB = AC$, AD is the perpendicular bisector of BC .

Thus, $BD = DC$.

