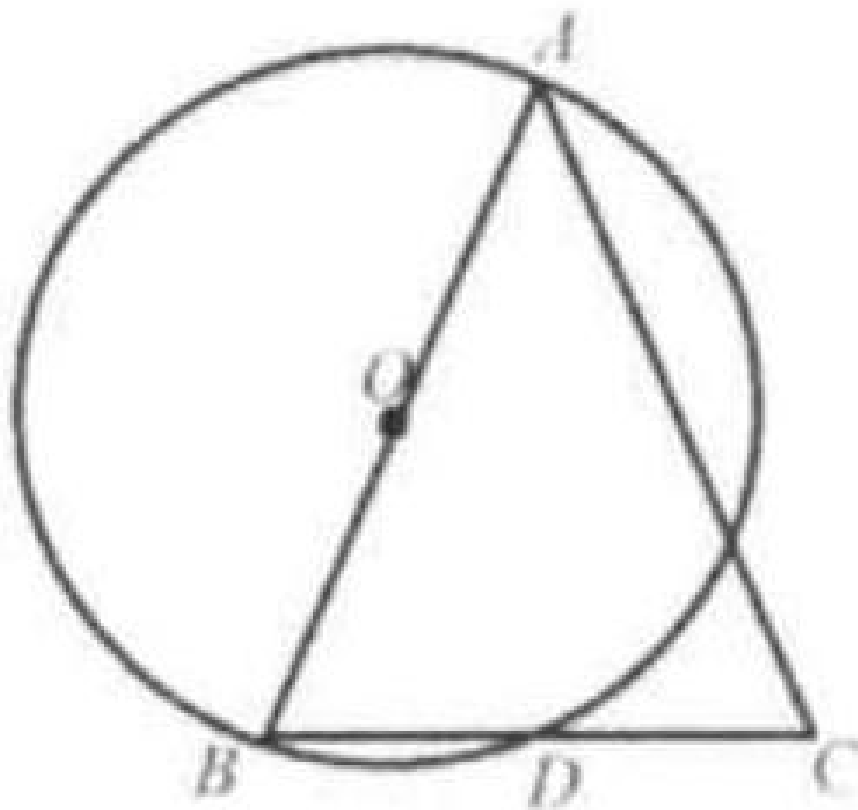


Example 1

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 OD .



Since $OB = OD$ (both are radius), $\angle OBD = \angle ODB$.

Since $AB = AC$, $\angle B = \angle C$.

So $\angle ACB = \angle ODB$. Thus $AC \parallel OD$.

Since $BO = OA$, $BD = DC$.

