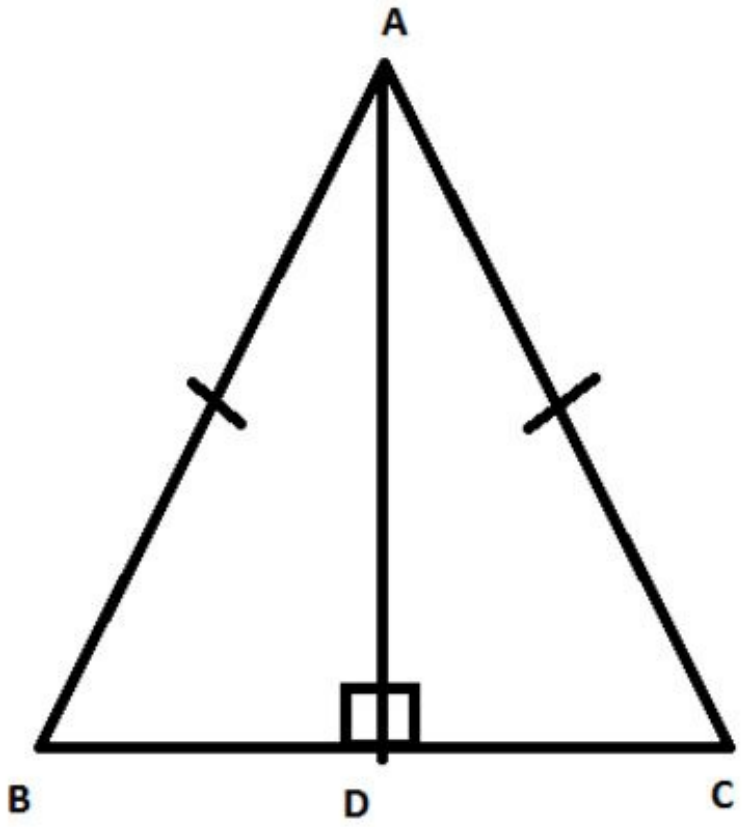
Congruence Ex 16.5 Q3

Answer :

We have AB = AC .....(1)
AD = DA (common).....(2)
and $\angle ADC = \angle ADB$ (AD⊥BC at point D).....(3)

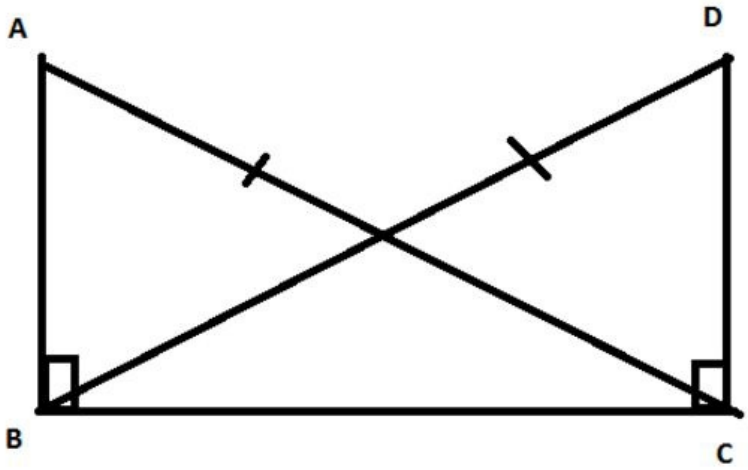
Therefore from 1, 2 and 3, by RHS congruence condition,
$\triangle ABD \cong \triangle ACD$
Now, the triangles are congruent . Therefore, BD = CD.
And $\angle ABD = \angle ACD$ (c.p.c.t).



Congruence Ex 16.5 Q4

Answer :

Consider
$\triangle ABC$ with $\angle B$ as right angle.
We now construct another right triangle on base BC, such that
$\angle C$ is a right angle and AB = DC
Also, BC = CB
Therefore, by RHS, $\triangle ABC \cong \triangle DCB$



Congruence Ex 16.5 Q5

Answer :

(i) Yes, $\triangle BCD \cong \triangle CBE$ by RHS congruence condition.

(ii) We have used hyp BC = hyp CB

BD = CE (given in question)

and $\angle BDC = \angle CEB = 90^{\circ}$.

********** END **********