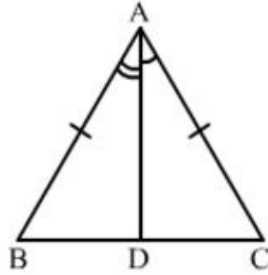




Congruence Ex 16.3 Q5

Answer :



(i) We have $AB = AC$ (given)

$\angle BAD = \angle CAD$ (AD bisects $\angle BAC$)

and $AD = AD$ (common)

Therefore by SAS condition of congruence, $\triangle ABD \cong \triangle ACD$.

(ii) We have used $AB, AC; \angle BAD = \angle CAD; AD, DA$.

(iii) Now $\triangle ABD \cong \triangle ACD$ therefore by c.p.c.t $BD = DC$.

Congruence Ex 16.3 Q6

Answer :

i) $AB = AD$ (given)

$\angle BAC = \angle DAC$ (given)

$AC = CA$ (common)

Therefore by SAS condition of congruency, $\triangle ABC \cong \triangle ADC$.

ii) $\angle ABC = \angle ADC$ (c.p.c.t)

$\angle ACD = \angle ACB$ (c.p.c.t)

Congruence Ex 16.3 Q7

Answer :

(i) Yes $\triangle ACD \cong \triangle CAB$ by SAS condition of congruency.

(ii) We have used $AB = DC, AC = CA$ and $\angle DCA = \angle BAC$.

(iii) $\angle CAD = \angle ACB$ since the two triangles are congruent.

(iv) Yes, this follows from $AD \parallel BC$ as alternate angles are equal. If alternate angles are equal the lines are parallel.

***** END *****