Congruence Ex 16.2 Q1

Answer :

1) In $\triangle ABC$ and $\triangle DEF$

AB = DE = 4.5 cm (Side)

BC = EF = 6 cm (Side)

and AC = DF = 4 cm (Side)

Therefore, by SSS criterion of congruence, $\triangle ABC \cong \triangle DEF$.

2)

In $\triangle ACB$ and $\triangle ADB$

$AC = AD$ (Side)

$BC = BD$ (Side)

and $AB = AB$ (Side)

Therefore, by SSS criterion of congruence, $\triangle ACB \cong \triangle ADB$.

3)

In $\triangle ABD$ and $\triangle FEC$,

$AB = FE$ (Side)

$AD = FC$ (Side)

$BD = CE$ (Side)

Therefore, by SSS criterion of congruence, $\triangle ABD \cong \triangle FEC$.

Congruence Ex 16.2 Q2

Answer :

Yes $\triangle ABD \cong \triangle CBD$ by the SSS criterion.

We have used the three conditions in the SSS criterion as follows:

AD = DC

AB = BC

and DB = BD

Congruence Ex 16.2 Q3

Answer :

We have AB = DC

BC = AD

and AC = AC

Therefore by SSS $\triangle ABC \cong \triangle CDA$.

We have used Side Side Side congruence condition with one side common in both the triangles.

Yes, we have used the fact that AC = CA.

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