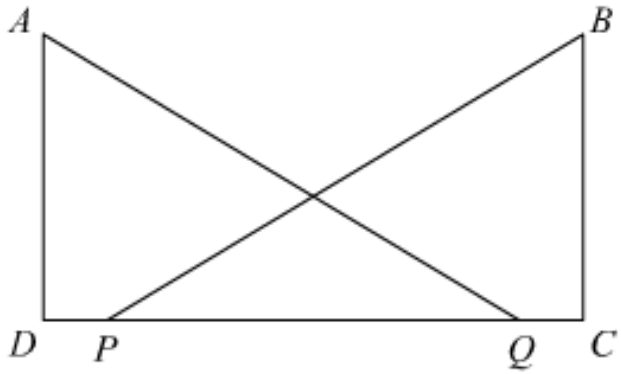
Congruent Triangles Ex 10.5 Q4

Answer :

It is given that

$AD \perp CD$, and $CB \perp CD$

If $AQ = BP$ and $DP = CQ$



We have to prove that $\angle DAQ = \angle CBP$

In triangles ADQ and BCP we have

$DQ = PC$ (Since $DP = QC$ given)

So $DP + PQ = PQ + QC$

$\Rightarrow DQ = PC$

And $AQ = BP$ (given)

$\angle ADQ = \angle BCP = 90^{\circ}$

So by right hand side congruence criterion we have

$\Delta ADQ \cong \Delta BCP$

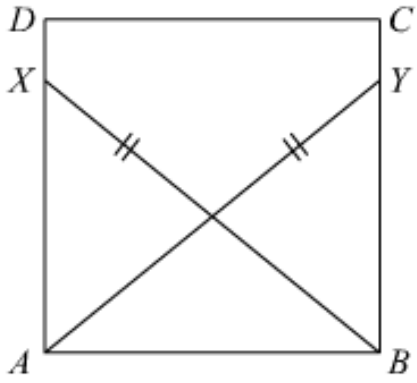
So $\angle A = \angle B$

Hence $\boxed{\angle DAQ = \angle CBP}$ Proved.

Congruent Triangles Ex 10.5 Q5

Answer :

It is given $ABCD$ is a square and $AY = BX$



We have to prove that $BY = AX$ and $\angle BAY = \angle ABX$

In right angled triangles ΔBAY and ΔABX we have

$AY = BX$

And $AB = AB$, and

$\angle ABy = \angle BAX = 90^{\circ}$

So by right hand side congruence criterion we have

$\Delta BAY \cong \Delta ABX$

So $BY = AX$ (since triangle is congruent)

Hence $\boxed{\angle BAY = \angle ABX}$ Proved.

Congruent Triangles Ex 10.5 Q6

Answer :

(1) $\boxed{F}$

(2) $\boxed{T}$

(3) $\boxed{T}$

(4) F

(5) T

(6) F

(7) F

(8) F

(9) T

Congruent Triangles Ex 10.5 Q7

Answer :

(1) Equal

(2) Equal

(3) Equal

(4) BC

(5) AC

(6) Equal to

(7) EFD

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