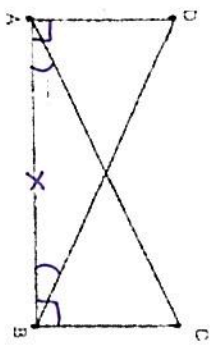


Unit 5 Review – Additional Proofs to Study

1.

Given:  $\overline{DA} \perp \overline{AB}$ ,  $\overline{CB} \perp \overline{BA}$   
 $\angle CAB \cong \angle DBA$

Prove:  $\angle D \cong \angle C$

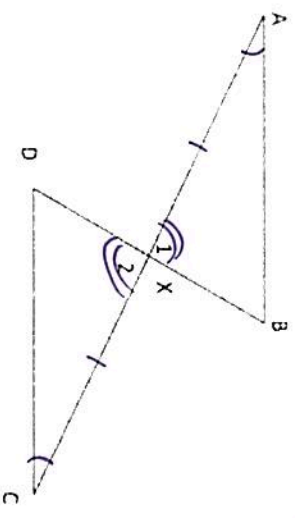


Statement	Reason
① $\overline{DA} \perp \overline{AB}$ , $\overline{CB} \perp \overline{BA}$	① Given
② $\angle DAB$ and $\angle CBA$ are right angles	② $\perp$ lines form right $\angle$ 's
③ $\angle DAB \cong \angle CBA$	③ All right $\angle$ 's are $\cong$
④ $\angle CAB \cong \angle DBA$	④ Given
⑤ $\overline{AB} \cong \overline{AB}$	⑤ Reflexive Property
⑥ $\triangle DAB \cong \triangle CBA$	⑥ ASA $\cong$ ASA
⑦ $\angle D \cong \angle C$	⑦ CPCTC

4. Given:  $\angle A \cong \angle C$

X is the midpoint  $\overline{AC}$

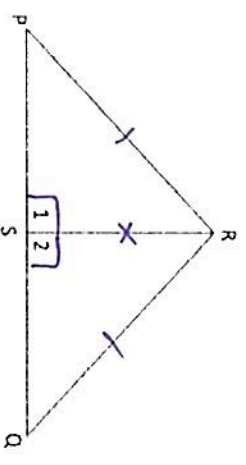
Prove:  $\triangle ABX \cong \triangle CDX$



Statement	Reason
① $\angle A \cong \angle C$	① Given
② X is the midpoint of $\overline{AC}$	② Given
③ $\overline{AX} \cong \overline{CX}$	③ A midpoint divides a segment into 2 $\cong$ segments
④ $\angle 1 \cong \angle 2$	④ Vertical $\angle$ 's are $\cong$
⑤ $\triangle ABX \cong \triangle CDX$	⑤ ASA $\cong$ ASA

5. Given:  $\overline{RS} \perp \overline{PQ}$   
 $\overline{PR} \cong \overline{QR}$

Prove:  $\triangle PRS \cong \triangle QRS$

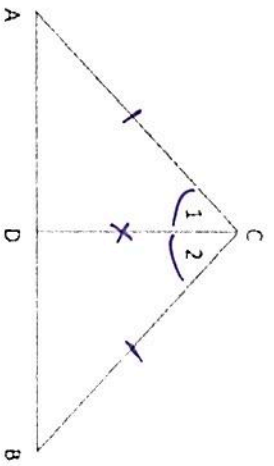


Statement	Reason
① $\overline{RS} \perp \overline{PQ}$	① Given
② $\angle 1$ and $\angle 2$ are rt $\angle$ 's	② $\perp$ lines form right $\angle$ 's
③ $\angle 1 \cong \angle 2$	③ All right $\angle$ 's are $\cong$
④ $\overline{PR} \cong \overline{QR}$	④ Given
⑤ $\overline{RS} \cong \overline{RS}$	⑤ Reflexive Property
⑥ $\triangle PRS \cong \triangle QRS$	⑥ HL $\cong$ HL

6. Given:  $\overline{CD}$  bisects  $\angle ACB$

$$\overline{AC} \cong \overline{BC}$$

Prove:  $\triangle ACD \cong \triangle BCD$

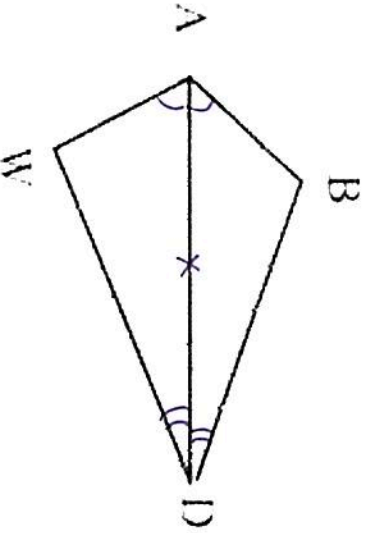


Statement	Reason
① $\overline{CD}$ bisects $\angle ACB$	① Given
② $\angle 1 \cong \angle 2$	② An angle bisector divides an angle into 2 $\cong$ $\angle$ 's
③ $\overline{AC} \cong \overline{BC}$	③ Given
④ $\overline{CD} \cong \overline{CD}$	④ Reflexive Property
⑤ $\triangle ACD \cong \triangle BCD$	⑤ SAS $\cong$ SAS

7.

Given  $\overline{AD}$  bisects  $\angle BAW$  and  $\angle BDW$

Prove:  $\overline{BD} \cong \overline{WD}$



Statement	Reason
① $\overline{AD}$ bisects $\angle BAW$ and $\angle BDW$	① Given
② $\angle BAD \cong \angle WAD$	② An angle bisector divides an angle into 2 $\cong$ $\angle$ 's
③ $\angle BDA \cong \angle WDA$	③ An angle bisector divides an angle into 2 $\cong$ $\angle$ 's
④ $\overline{AD} \cong \overline{AD}$	④ Reflexive Property
⑤ $\triangle BAD \cong \triangle WAD$	⑤ ASA $\cong$ ASA
⑥ $\overline{BD} \cong \overline{WD}$	⑥ CPCTC