

7) Given:  $\overline{AB} \cong \overline{CB}$ ,  
 $\overline{DB}$  bisects  $\angle ABC$ .  
 Prove:  $\triangle ABD \cong \triangle CBD$

Statement	Reason
1) $\overline{AB} \cong \overline{CB}$	1) Given
2) $\overline{DB}$ bisects $\angle ABC$	2) Given
3) $\angle 1 \cong \angle 2$	3) Def. of an angle bisector
4) $\overline{DB} \cong \overline{DB}$	4) Reflexive prop.
5) $\triangle ABD \cong \triangle CBD$	5) SAS $\cong$ SAS

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8) Given:  $AC \perp BC$ ,  $DE \perp CE$ ,  
 $\overline{BC} \cong \overline{CE}$ ,  $\overline{AC} \cong \overline{DE}$   
 Prove:  $\triangle ABC \cong \triangle DCE$

Statement	Reason
1) $\overline{AC} \perp \overline{BC}$	1) Given
2) $\overline{DE} \perp \overline{CE}$	2) Given
3) $\overline{BC} \cong \overline{CE}$	3) Given
4) $\overline{AC} \cong \overline{DE}$	4) Given
5) $\angle 1$ & $\angle 2$ are rt. $\angle$ 's	5) $\perp$ lines form rt. $\angle$ 's
6) $\angle 1 \cong \angle 2$	6) All rt. $\angle$ 's are $\cong$
7) $\triangle ABC \cong \triangle DCE$	7) SAS $\cong$ SAS

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9) Given:  $E$  is the midpoint of  $\overline{BD}$ ,  
 $\overline{AB} \cong \overline{CD}$ ,  
 $\overline{AE} \cong \overline{CE}$   
 Prove:  $\triangle AEB \cong \triangle CED$

Statement	Reason
1) $E$ is the midpoint of $\overline{BD}$	1) Given
2) $\overline{AB} \cong \overline{CD}$	2) Given
3) $\overline{AE} \cong \overline{CE}$	3) Given
4) $\overline{BE} \cong \overline{DE}$	4) Def. of a midpt.
5) $\triangle AEB \cong \triangle CED$	5) SSS $\cong$ SSS

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10) Given:  $\overline{AB} \cong \overline{ED}$ ,  
 $\angle A \cong \angle D$ ,  
 $\overline{AB} \perp \overline{BC}$ ,  
 $\overline{ED} \perp \overline{FE}$   
 Prove:  $\triangle ABC \cong \triangle DEF$

Statement	Reason
1) $\overline{AB} \cong \overline{ED}$	1) Given
2) $\angle A \cong \angle D$	2) Given
3) $\overline{AB} \perp \overline{BC}$	3) Given
4) $\overline{ED} \perp \overline{FE}$	4) Given
5) $\angle 1$ & $\angle 2$ are rt. $\angle$ 's	5) $\perp$ lines form rt. $\angle$ 's
6) $\angle 1 \cong \angle 2$	6) All rt. $\angle$ 's are $\cong$
7) $\triangle ABC \cong \triangle DEF$	7) ASA $\cong$ ASA

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11) Given:  $\angle C \cong \angle B$ ,  
 $\overline{CD} \cong \overline{DB}$ ,  
 $\overline{AD} \perp \overline{CB}$   
 Prove:  $\triangle CAD \cong \triangle BAD$

Statement	Reason
1) $\angle C \cong \angle B$	1) Given
2) $\overline{CD} \cong \overline{DB}$	2) Given
3) $\overline{AD} \perp \overline{CB}$	3) Given
4) $\angle 1$ & $\angle 2$ are rt. $\angle$ 's	4) $\perp$ lines form rt. $\angle$ 's
5) $\angle 1 \cong \angle 2$	5) All rt. $\angle$ 's are $\cong$
6) $\triangle CAD \cong \triangle BAD$	6) ASA $\cong$ ASA

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