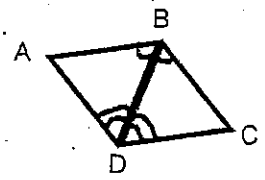
CPCTC = Corresponding Parts of Congruent Triangles are Congruent NOTES

Section 4.7 Notes **Name:** _____ **Date:** _____

State why the two triangles are congruent. Choose from SSS, SAS, ASA, AAS or HL. Write the congruence statement. List the other parts that are congruent by CPCTC.

1.



Congruent by: ASA

Congruence statement:

$\triangle ABD \cong \triangle CBD$

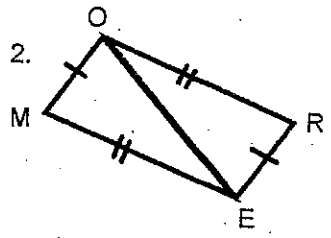
Other congruent parts: CPCTC

$\overline{AB} \cong \overline{CB}$

$\overline{AD} \cong \overline{CD}$

$\angle A \cong \angle C$

2.



Congruent by: SSS

Congruence statement:

$\triangle MED \cong \triangle ROE$

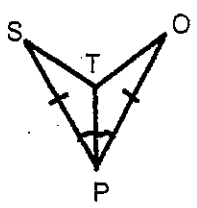
Other congruent parts: CPCTC

$\angle M \cong \angle R$

$\angle MOE \cong \angle RED$

$\angle RDE \cong \angle MED$

3.



Congruent by: SAS

Congruence statement:

$\triangle TPS \cong \triangle TPO$

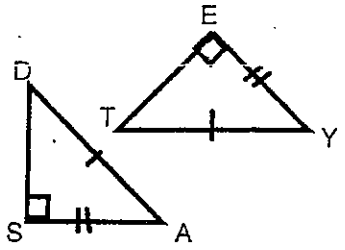
Other congruent parts:

$\angle S \cong \angle O$

$\overline{ST} \cong \overline{OT}$

$\angle STP \cong \angle OTP$

4.



Congruent by: HL

Congruence statement:

$\triangle DSA \cong \triangle TEY$

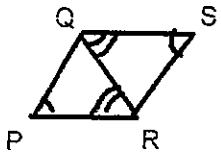
Other congruent parts:

$\overline{DS} \cong \overline{TE}$

$\angle A \cong \angle Y$

$\angle D \cong \angle T$

5.



Congruent by: AAS

Congruence statement:

$\triangle PQR \cong \triangle SRQ$

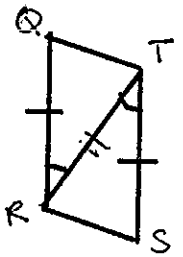
Other congruent parts:

$\angle PQR \cong \angle SRQ$

$\overline{PQ} \cong \overline{RS}$

$\overline{PR} \cong \overline{SQ}$

6.



Congruent by: SAS

Congruence statement:

$\triangle QRT \cong \triangle STR$

Other congruent parts:

$\angle Q \cong \angle S$

$\overline{QT} \cong \overline{SR}$

$\angle SRT \cong \angle QTR$

NOTES Cont.

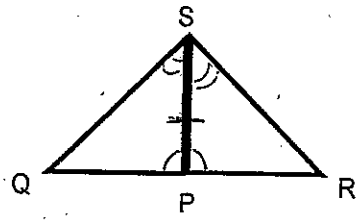
Section 4.7 Notes **Name:** _____ **Date:** _____

CPCTC Proofs

Use one of the congruence theorems we have studied (SSS, SAS, ASA, AAS, HL) to prove that the triangles are congruent. Then use CPCTC to help draw further conclusions.

1. Given: $\angle QPS \cong \angle RPS$ and $\angle QSP \cong \angle RSP$

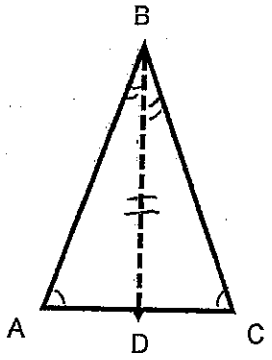
   Prove: $\overline{PQ} \cong \overline{PR}$



Statements	Reasons
1. $\angle QPS \cong \angle RPS$	1. Given
2. $\angle QSP \cong \angle RSP$	2. Given
3. $\overline{PS} \cong \overline{PS}$	3. Reflexive
4. $\triangle QSP \cong \triangle RSP$	4. ASA
5. $\overline{PQ} \cong \overline{SR}$	5. CPCTC

2. Given: $\angle A \cong \angle C$ and $\overline{BD}$ bisects $\angle ABC$

   Prove: $\overline{AB} \cong \overline{CB}$



Statements	Reasons
1. $\angle A \cong \angle C$	1- Given
2. $\overline{BD}$ Bisects $\angle ABC$	2. Given
3. $\angle ABD \cong \angle CBD$	3. Definition of a bisector
4. $\overline{BD} \cong \overline{BD}$	4. Reflexive
5. $\triangle ABD \cong \triangle CBD$	5. AAS
6. $\overline{EG} \cong \overline{mk}$	7. CPCTC