

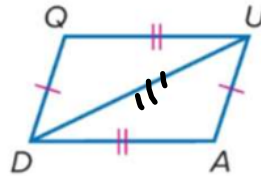
4.3 Proving Triangles Congruent SSS and SAS

Date: _____

Proof Packet #2

1. Prove: $\triangle AUD \cong \triangle QUD$

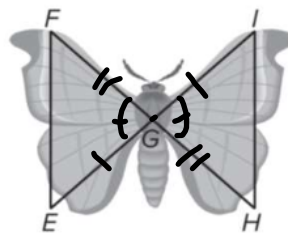
Given: $\overline{QU} \cong \overline{AD}$, $\overline{QD} \cong \overline{AU}$



Statements	Reasons
1.	1. Given
2. $\overline{DU} \cong \overline{DU}$	2. Reflexive
3. $\triangle AUD \cong \triangle QUD$	3. SSS Post

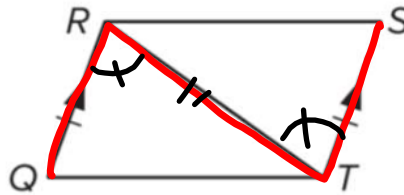
2. Prove: $\triangle FEG \cong \triangle HIG$

Given: G is the midpoint of \overline{EH} and \overline{FH} .



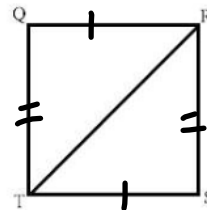
Statements	Reasons
1.	1. Given
2. $\overline{EG} \cong \overline{IG}$, $\overline{FG} \cong \overline{HG}$	2. Def of midpoint
3. $\angle FGE \cong \angle IGH$	3. Vert. \angle Thm
4. $\triangle FEG \cong \triangle HIG$	4. SAS Post

3. Prove: $\angle Q \cong \angle S$
 Given: $\overline{RQ} \parallel \overline{TS}$
 $\overline{RT} \cong \overline{RS}$



Statements	Reasons
	1. Given
2. $\angle QRT \cong \angle STR$	2. AIA Thm
3. $\overline{RT} \cong \overline{RT}$	3. Reflexive Prop
4. $\triangle QRT \cong \triangle STR$	4. SAS Post
5. $\angle Q \cong \angle S$	5. CPCTC

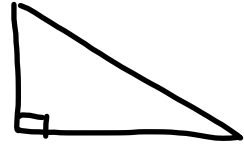
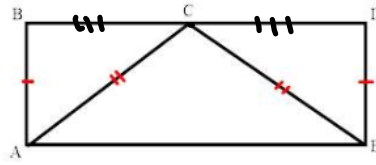
4. Prove: $\triangle QRT \cong \triangle SRT$
 Given: $\overline{QR} \cong \overline{SR}$
 $\overline{ST} \cong \overline{QT}$



Statements	Reasons
1.	1. Given
2. $\overline{TR} = \overline{RT}$	2. Reflexive Prop
3. $\triangle QRT \cong \triangle SRT$	3. SSS Post.

5. Prove: $\triangle ABC \cong \triangle EDC$

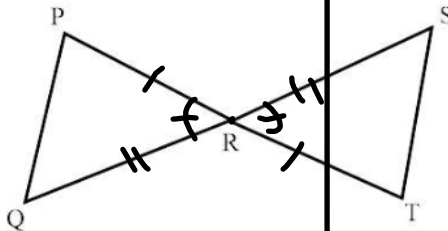
Given: $\overline{AB} \cong \overline{ED}$
 $\overline{CA} \cong \overline{CE}$
 \overline{AC} bisects \overline{BD}



Statements	Reasons
1.	1. Given
2. $\overline{BC} \cong \overline{CD}$	2. Def of seg bisector
3. $\triangle ABC \cong \triangle EDC$	3. SSS Post

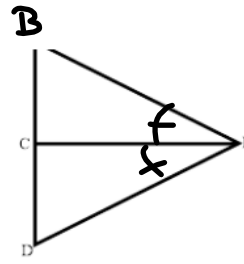
6. Prove: $\triangle PRQ \cong \triangle TRS$

Given: R is the midpoint of \overline{QS} and \overline{PT}



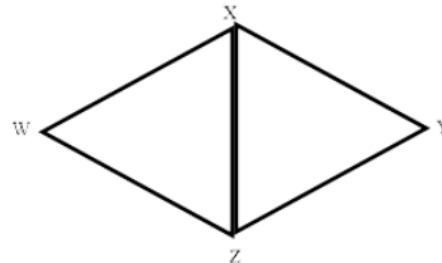
Statements	Reasons
	1. Given
2. $\overline{QR} \cong \overline{RS}, \overline{PR} \cong \overline{TR}$	2. Def of midpt
3. $\angle PRQ \cong \angle TRS$	3. Vert Thm
	4. SAS Post

7. **Given:** \overline{CE} bisects $\angle BED$; $\angle BCE$ and $\angle ECD$ are right angles.
Prove: $\triangle ECB \cong \triangle ECD$



Statements	Reasons

8. **Given:** $\angle W \cong \angle Y$, $\overline{WZ} \cong \overline{YZ}$,
 \overline{XZ} bisects $\angle WZY$.
Prove: $\triangle XWZ \cong \triangle XYZ$



Statements	Reasons