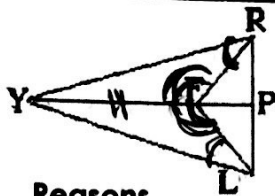


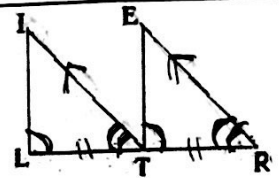
Proof Practice:

1. Given: $\angle YLF \cong \angle FRY$
 $\angle RFY \cong \angle LFY$
 Prove: $\triangle FRY \cong \triangle FLY$



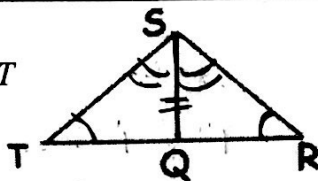
Statements	Reasons
1. $\angle YLF \cong \angle FRY$	1. Given
2. $\angle RFY \cong \angle LFY$	2. Given
3. $\overline{FY} \cong \overline{FY}$	3. Reflexive Property
4. $\triangle FRY \cong \triangle FLY$	4. AAS AAS

2. Given: $\overline{LT} \cong \overline{TR}, \overline{IT} \parallel \overline{ER}$
 $\angle ILT \cong \angle ETR$
 Prove: $\triangle LIT \cong \triangle TER$



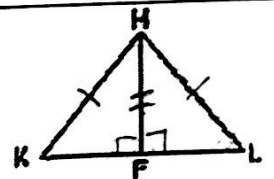
Statements	Reasons
1. $\overline{LT} \cong \overline{TR}$	1. Given
2. $\overline{IT} \parallel \overline{ER}$	2. Given
3. $\angle ILT \cong \angle ETR$	3. Given
4. $\angle ITL \cong \angle ERT$	4. Corresponding \angle s of parallel lines are \cong
5. $\triangle LIT \cong \triangle TER$	5. ASA

3. Given: $\angle R \cong \angle T$
 \overline{SQ} bisects $\angle RST$
 Prove: $\triangle QST \cong \triangle QSR$



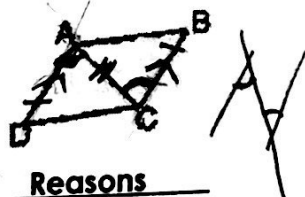
Statements	Reasons
1. $\angle R \cong \angle T$	1. Given
2. \overline{SQ} bisects $\angle RST$	2. Given
3. $\angle TSQ \cong \angle RSQ$	3. Definition of an angle bisector
4. $\overline{SQ} \cong \overline{SQ}$	4. Reflexive Property
5. $\triangle QST \cong \triangle QSR$	5. AAS

4. Given: $\overline{HF} \perp \overline{KL}$
 $\overline{HK} \cong \overline{HL}$
 Prove: $\triangle HKF \cong \triangle HLF$



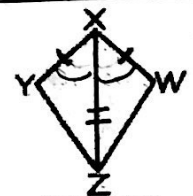
Statements	Reasons
1. $\overline{HF} \perp \overline{KL}$	1. Given
2. $\overline{HK} \cong \overline{HL}$	2. Given
3. $\angle HKF$ and $\angle HFL$ are right \angle s	3. Definition of perpendicular lines
4. $\overline{HF} \cong \overline{HF}$	4. Reflexive Property
5. $\triangle HKF \cong \triangle HLF$	5. HL

5. **Given: $\overline{AD} \parallel \overline{BC}$
 $\overline{AD} \cong \overline{BC}$
 Prove: $\overline{AB} \cong \overline{CD}$



Statements	Reasons
1. $\overline{AD} \parallel \overline{BC}$	1. Given
2. $\overline{AD} \cong \overline{BC}$	2. Given
3. $\angle DAC \cong \angle BCA$	3. Alternate Int. angles theorem
4. $\overline{AC} \cong \overline{AC}$	4. Reflexive Property
5. $\triangle ADC \cong \triangle CAB$	5. SAS
6. $\overline{AB} \cong \overline{CD}$	6. CPCTC

6. **Given: $\overline{YX} \cong \overline{WX}$
 \overline{ZX} bisects $\angle YXW$
 Prove: $\overline{YZ} \cong \overline{WZ}$



Statements	Reasons
1. $\overline{YX} \cong \overline{WX}$	1. Given
2. \overline{ZX} bisects $\angle YXW$	2. Given
3. $\angle YXZ \cong \angle WXZ$	3. Defn. of \angle bisector
4. $\overline{XZ} \cong \overline{XZ}$	4. Reflexive Property
5. $\triangle YXZ \cong \triangle WXZ$	5. SAS
6. $\overline{YZ} \cong \overline{WZ}$	6. CPCTC

Geometry
HW - Proving Triangle Congruence and CPCT Practice

Name _____

1. $\triangle HYZ$ is congruent $\triangle KLR$. Complete the following congruent statements.

$\angle L \cong \angle Y$

$\overline{LR} \cong \overline{YZ}$

$\angle H \cong \angle K$

$\overline{ZH} \cong \overline{RK}$

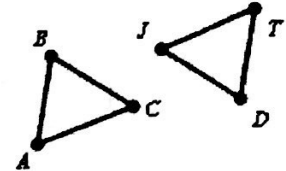
2. $\triangle ABC$ is congruent to $\triangle TDJ$. Complete the following congruent statements.

$\angle B \cong \angle D$

$\overline{JD} \cong \overline{CB}$

$\angle T \cong \angle A$

$\overline{BC} \cong \overline{DJ}$



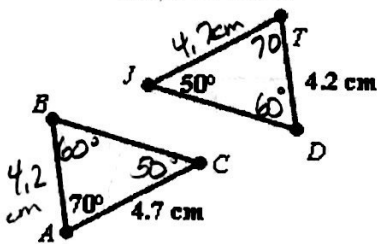
3. $\triangle ABC$ is congruent to another triangle. Provided is some information about the two triangles, $\overline{AB} \cong \overline{AL}$ and $\overline{CA} \cong \overline{GA}$. From this information determine the triangle congruence statement.



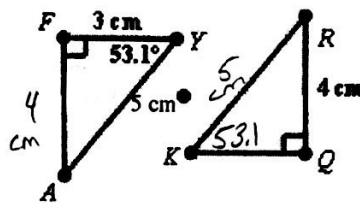
$\triangle ABC \cong \triangle ALG$

4. Determine the missing information.

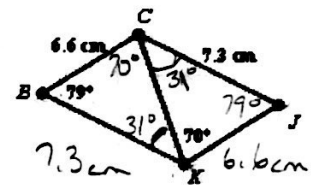
$\triangle ABC \cong \triangle TDJ$



$\triangle AFY \cong \triangle RQK$



$\triangle CKB \cong \triangle KCI$



$m\angle C = 50^\circ$ $TJ = 4.7 \text{ cm}$ $m\angle K = 53.1^\circ$ $AF = 4 \text{ cm}$ $m\angle I = 79^\circ$ $BK = 7.3 \text{ cm}$
 $m\angle B = 60^\circ$ $AB = 4.2 \text{ cm}$ $m\angle A = 36.9^\circ$ $KR = 5 \text{ cm}$ $m\angle JCK = 31^\circ$ $JK = 6.6 \text{ cm}$

Proof Practice:

1. Given: $\overline{QS} \cong \overline{PR}$, $\overline{PS} \perp \overline{RS}$

$\overline{QR} \perp \overline{RS}$

Prove: $\triangle PRS \cong \triangle QSR$



HL

Statements

Reasons

1. $\overline{QS} \cong \overline{PR}$, $\overline{PS} \perp \overline{RS}$

1. Given

$\overline{QR} \perp \overline{RS}$

2. Definition of perpendicular lines.

2. $\angle S$ and $\angle R$ are right \angle s

3. Reflexive Property

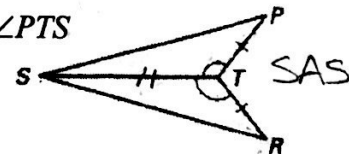
3. $\overline{SR} \cong \overline{SR}$

4. $\triangle PRS \cong \triangle QSR$

4. HL

2. Given: $\overline{PT} \cong \overline{RT}$; $\angle RTS \cong \angle PTS$

Prove: $\triangle TPS \cong \triangle TRS$



Statements

1. $\overline{PT} \cong \overline{RT}$, $\angle RTS \cong \angle PTS$

1. Given (all)

2. $\overline{ST} \cong \overline{ST}$

2. Reflexive Prop.

3. $\triangle TPS \cong \triangle TRS$

3. SAS