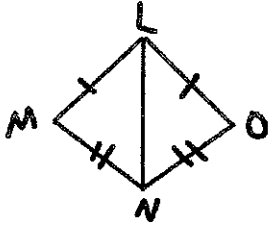


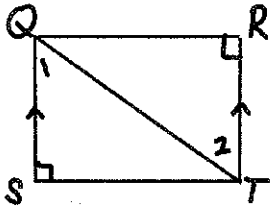
Name: Answer Key Date: _____**Proofs - Proving Triangles Congruent**

Problem 1:



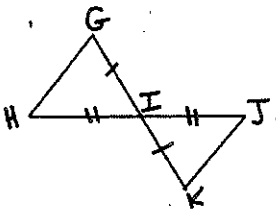
Statement	Reason
1. $\overline{LM} \cong \overline{LO}$	1. Given
2. $\overline{MN} \cong \overline{ON}$	2. Given
3. $\overline{LN} \cong \overline{LN}$	3. Reflexive Property of \cong
4. $\triangle LMN \cong \triangle LON$	4. SSS

Problem 2:



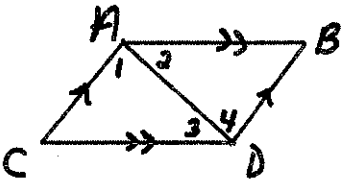
Statement	Reason
1. $\overline{QS} \parallel \overline{TR}$	1. Given
2. $\angle R \cong \angle S$	2. Given, All Rt \angle 's are \cong
3. $\angle 1 \cong \angle 2$	3. Alt. Int. \angle 's
4. $\overline{QT} \cong \overline{QT}$	4. Reflexive Property
5. $\triangle QST \cong \triangle TRQ$	5. AAS

Problem 3:



Statement	Reason
1. $\overline{GI} \cong \overline{KI}$	1. Given
2. $\overline{HI} \cong \overline{JI}$	2. Given
3. $\angle GIH \cong \angle KIJ$	3. def. of Vertical Angles
4. $\triangle GIH \cong \triangle KIJ$	4. SAS

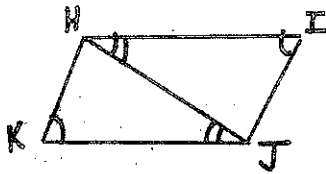
Problem 4:



Statement	Reason
1. $\overline{AC} \parallel \overline{BD}, \overline{AB} \parallel \overline{CD}$	1. Given
2. $\angle 1 \cong \angle 4, \angle 2 \cong \angle 3$	2. Alt. Int. \angle 's
3. $\overline{AD} \cong \overline{AD}$	3. Reflexive Property
4. $\triangle ADC \cong \triangle DAB$	4. ASA

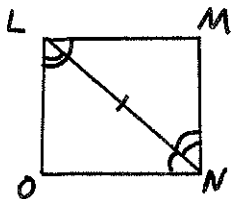
Fill in the blank proofs:

Problem 5:



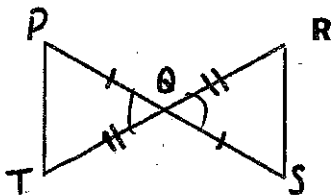
Statement	Reason
1. $\angle I \cong \angle K$	1. Given
2. $\angle IHJ \cong \angle KJH$	2. Given
3. $\overline{HJ} \cong \overline{HJ}$	3. Reflexive Property
4. $\triangle HJK \cong \triangle JHI$	4. AAS

Problem 6:



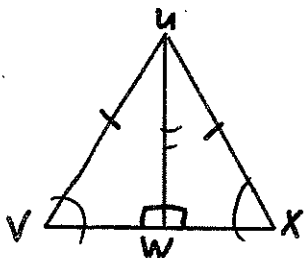
Statement	Reason
1. $\angle MLN \cong \angle ONL$	1. Given
2. $\angle OLN \cong \angle MNL$	2. Given
3. $\overline{LN} \cong \overline{LN}$	3. Reflexive Property
4. $\triangle LNO \cong \triangle NLM$	4. ASA

Problem 7:



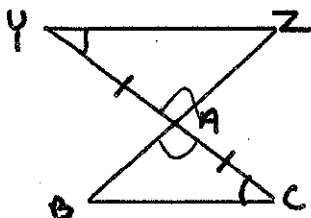
Statement	Reason
1. $\overline{PQ} \cong \overline{RQ}$	1. Given
2. $\overline{QT} \cong \overline{QS}$	2. Given
3. $\angle PQT \cong \angle RQS$	3. Vertical Angles
4. $\triangle PQT \cong \triangle RQS$	4. SAS

Problem 8:



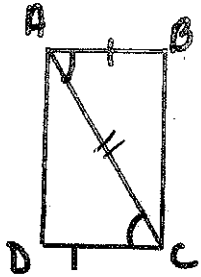
Statement	Reason
1. $\overline{UV} \cong \overline{UX}$	1. Given
2. $\angle VWU \cong \angle XWU$	2. Rt \angle 's are \cong
3. $\overline{UW} \cong \overline{UW}$	3. Reflexive Property
4. $\angle V \cong \angle X$	4. def. of isosceles \triangle
5. $\triangle UWV \cong \triangle UWX$	5. AAS or HL

Problem 9:



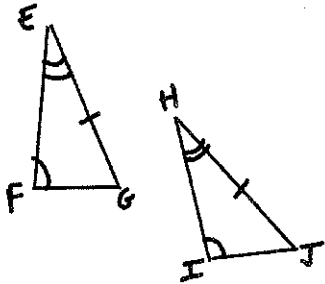
Statement	Reason
1. $\angle Y \cong \angle C$	1. Given
2. $\overline{YA} \cong \overline{CA}$	2. Given
3. $\angle ZYA \cong \angle CBA$	3. Vertical Angles are congruent
4. $\triangle YZA \cong \triangle CBA$	4. ASA

Problem 10:



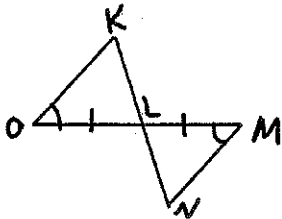
Statement	Reason
1. $\angle BAC \cong \angle DCA$	1. Given
2. $\overline{AB} \cong \overline{DC}$	2. Given
3. $\overline{AC} \cong \overline{AC}$	3. Reflexive Property
4. $\triangle ABC \cong \triangle CDA$	4. SAS

Problem 11:



Statement	Reason
1. $\angle F \cong \angle I$	1. Given
2. $\angle E \cong \angle H$	2. Given
3. $\overline{EG} \cong \overline{HJ}$	3. Given
4. $\triangle EFG \cong \triangle HIJ$	4. AAS

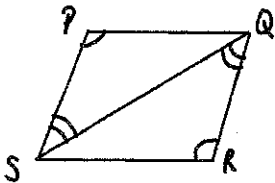
Problem 12:



Statement	Reason
1. $\angle O \cong \angle M$	1. Given
2. $\overline{OL} \cong \overline{ML}$	2. Given
3. $\angle KLO \cong \angle NLM$	3. Vertical Angles
4. $\triangle KLO \cong \triangle NLM$	4. ASA
5. $\angle K \cong \angle N$	5. CPCTC

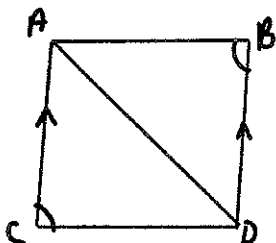
corresponding parts of $\cong \triangle$'s
are congruent

Problem 13:



Statement	Reason
1. $\angle P \cong \angle R$	1. Given
2. $\angle PSQ \cong \angle RSQ$	2. Given
3. $\overline{SQ} \cong \overline{SQ}$	3. Reflexive
4. $\triangle PQS \cong \triangle RSQ$	4. AAS

Problem 14:



Statement	Reason
1. $\overline{AC} \parallel \overline{BD}$	1. Given
2. $\angle C \cong \angle B$	2. Given
3. $\angle CAD \cong \angle BDA$	3. Alt. Int. \angle 's
4. $\overline{AD} \cong \overline{AD}$	4. Reflexive Property
5. $\triangle ACD \cong \triangle DBA$	5. AAS