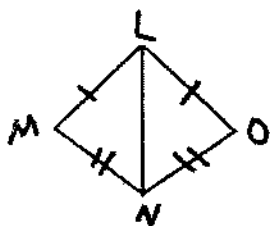


Name: _____ Date: _____

Proofs – Proving Triangles Congruent

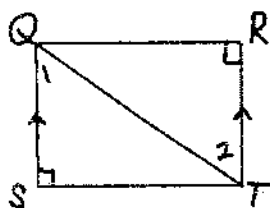
Matching: Use the choices listed at the bottom in the box for problems #1 – 4

Problem 1:



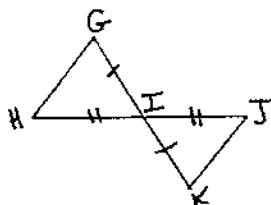
Statement	Reason
1. $\overline{LM} \cong \overline{LO}$	1. Given
2. $\overline{MN} \cong \overline{ON}$	2. Given
3. $\overline{LN} \cong \overline{LN}$	3.
4. $\triangle LMN \cong \triangle LON$	4.

Problem 2:



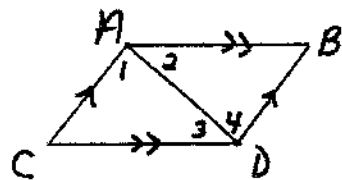
Statement	Reason
1. $\overline{QS} \parallel \overline{RT}$	1. Given
2. $\angle R \cong \angle S$	2. Given
3. $\angle 1 \cong \angle 2$	3.
4. $\overline{QT} \cong \overline{QT}$	4.
5. $\triangle QST \cong \triangle TRQ$	5.

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.
4. $\triangle GIH \cong \triangle KIJ$	4.

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.
3. $\overline{AD} \cong \overline{AD}$	3.
4. $\triangle ADC \cong \triangle DAB$	4.

Choices for problems #1 – 4 (some will be used more than once):

AAS ASA

SAS SSS

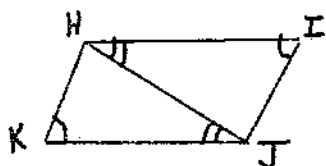
Alternate Interior Angles are \cong

Reflexive Property

Vertical Angles are \cong

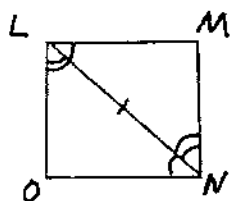
Fill in the blank proofs:

Problem 5:



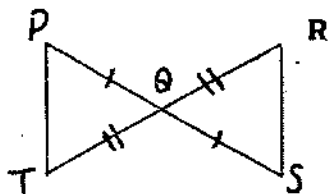
Statement	Reason
1. $\angle I \cong \angle K$	1. Given
2. $\angle IHJ \cong \angle KJH$	2. Given.
3. $\overline{HJ} \cong \overline{JH}$	3.
4. $\triangle HJK \cong \triangle JHI$	4.

Problem 6:



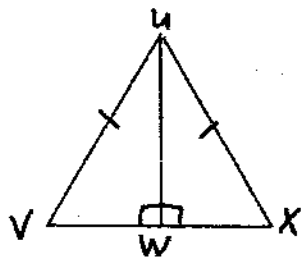
Statement	Reason
1. $\angle MLN \cong \angle ONL$	1. Given
2. $\angle OLN \cong \angle \underline{\hspace{1cm}}$	2. Given
3.	3. Reflexive Property (Given)
4. $\triangle LNO \cong \triangle LNM$	4.

Problem 7:



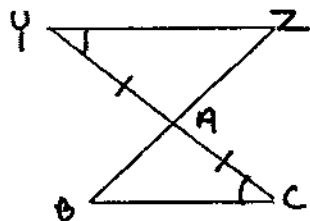
Statement	Reason
1. $\overline{PQ} \cong \overline{QS}$	1. Given
2.	2. Given
3. $\angle PQT \cong \angle RQS$	3.
4. $\triangle PQT \cong \triangle RQS$	4.

Problem 8:



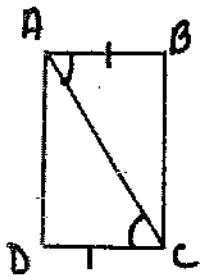
Statement	Reason
1. $\overline{UV} \cong \overline{UX}$	1. Given
2. $\angle VWU \cong \angle XWU$	2. Given
3.	3. Reflexive Property
4. $\triangle UWV \cong \triangle UWX$	4.

Problem 9:



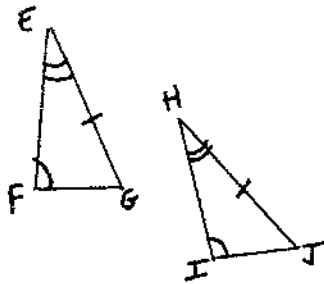
Statement	Reason
1. $\angle Y \cong \angle C$	1.
2.	2. Given
3.	3.
4. $\triangle YZA \cong \triangle CBA$	4.

Problem 10:



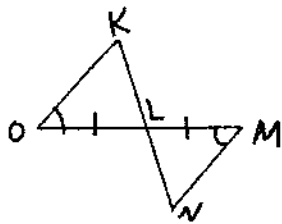
Statement	Reason
1. $\angle BAC \cong \angle DCA$	1. Given
2.	2. Given
3.	3.
4. $\triangle ABC \cong \triangle CDA$	4.

Problem 11:



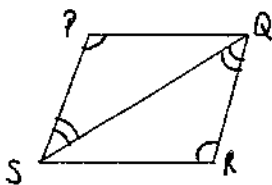
Statement	Reason
1. $\angle F \cong \angle I$	1.
2. $\angle _ \cong \angle _$	2.
3.	3.
4. $\triangle EFG \cong \triangle HIJ$	4.

Problem 12:



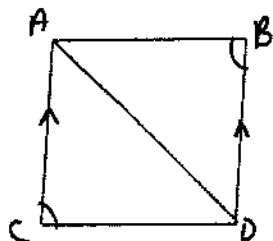
Statement	Reason
1. $\angle _ \cong \angle M$	1. Given
2.	2. Given
3. $\angle KLO \cong \angle _$	3.
4. $\triangle KLO \cong \triangle NEM$	4.
5. $\angle K \cong \angle N$	5. CPCTC

Problem 13:



Statement	Reason
1. $\angle P \cong \angle _$	1. Given
2.	2. Given
3.	3. Reflexive
4. $\triangle PQS \cong \triangle RSQ$	4.

Problem 14:



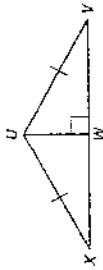
Statement	Reason
1. $\overline{AC} \parallel \overline{BD}$	1.
2.	2.
3. $\angle CAD \cong \angle BDA$	3.
4.	4.
5. $\triangle ACD \cong \triangle _$	5.

Name: _____ Date: _____

Triangle Proofs

Practice #1:

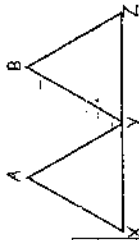
Given: $\triangle UXW$ and $\triangle UVW$ are right triangles, $\overline{UX} \cong \overline{UV}$
 Prove: $\angle X \cong \angle V$



Statements	Reasons
1) $\triangle UXW$ and $\triangle UVW$ are rt. triangles	
2) $\overline{UX} \cong \overline{UV}$	
3) $\overline{UW} \cong \overline{UW}$	
4)	
5) $\angle X \cong \angle V$	

Practice #2:

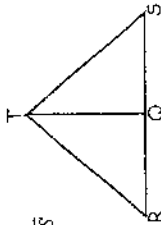
Given: Y is the midpoint of \overline{XZ} , $\overline{AY} \cong \overline{BY}$, and $\angle AYZ \cong \angle BYX$.
 Prove: $\square XYA \cong \square ZYB$



Statements	Reasons
1) $\overline{AY} \cong \overline{BY}$	
2) $\angle AYZ \cong \angle BYX$	
3) Y is the midpoint of \overline{XZ}	
4) $\overline{XY} \cong \overline{ZY}$	
5) $\square XYA \cong \square ZYB$	

Practice #3:

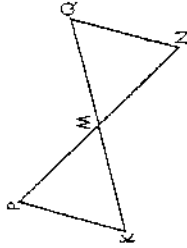
Given: $\square RTS$ is isosceles with legs \overline{RT} and \overline{TS} . Q is the midpoint of \overline{RS}
 Prove: $\square RTQ \cong \square STQ$



Statements	Reasons
1)	
2) $\overline{RT} \cong \overline{TS}$	
3)	
4)	
5)	
6) $\square RTQ \cong \square STQ$	

Practice #4:

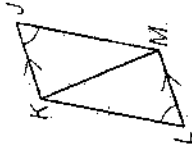
Given: $\angle P \cong \angle N$, $\overline{PM} \cong \overline{NM}$
 Prove: $\square PMK \cong \square NMQ$



Statements	Reasons
1)	
2)	
3)	
4)	

Practice #5:

Given: $\angle L \cong \angle J$, $\overline{LM} \cong \overline{JK}$
 Prove: $\square LKM \cong \square JMK$



Statements	Reasons
1)	
2)	
3)	
4)	
5)	