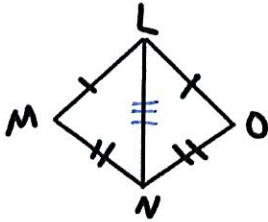


Day 5 - Proofs

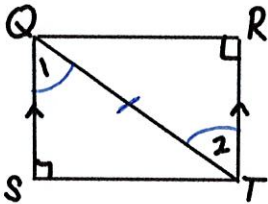
Practice: Use the choices listed at the bottom in the box to complete the proofs for problems #1 – 4.

Problem 1:



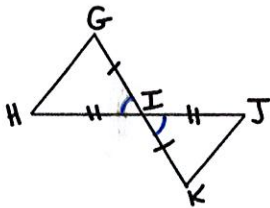
Statement	Reason
1. $\overline{LM} \cong \overline{LO}$	1. Given
2. $\overline{MN} \cong \overline{ON}$	2. Given
3. $\overline{LN} \cong \overline{LN}$	3. Reflexive Property
4. $\triangle LMN \cong \triangle LON$	4. SSS \cong postulate

Problem 2:



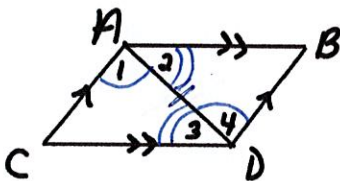
Statement	Reason
1. $\overline{QS} \parallel \overline{RT}$	1. Given
2. $\angle R \cong \angle S$	2. Given
3. $\angle 1 \cong \angle 2$	3. Alt int \angle s Theorem
4. $\overline{QT} \cong \overline{QT}$	4. Reflexive Property
5. $\triangle QST \cong \triangle TRQ$	5. AAS \cong postulate

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. Vertical Angles Theorem
4. $\triangle GIH \cong \triangle KIJ$	4. SAS \cong postulate

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 Interior \angle s Theorem
3. $\overline{AD} \cong \overline{AD}$	3. Reflexive Property
4. $\triangle ADC \cong \triangle DAB$	4. ASA \cong postulate

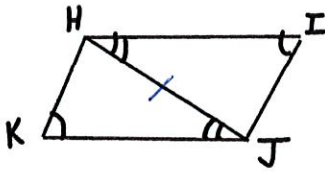
Reasons Bank for Problems #1 – 4 (some will be used more than once):

AAS ASA
SAS SSS

Alternate Interior Angles are \cong
Reflexive Property
Vertical Angles are \cong

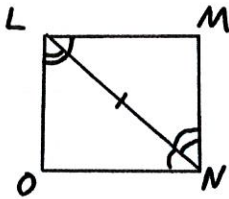
Fill in the missing information to complete the proofs:

Problem 5:



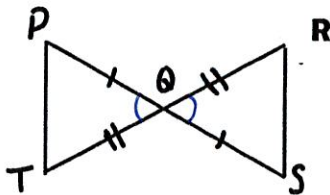
Statement	Reason
1. $\angle I \cong \angle K$	1. Given
2. $\angle IHJ \cong \angle KJH$	2. Given
3. $\overline{HJ} \cong \overline{JH}$	3. Reflexive Property
4. $\triangle HJK \cong \triangle JHI$	4. AAS \cong postulate

Problem 6:



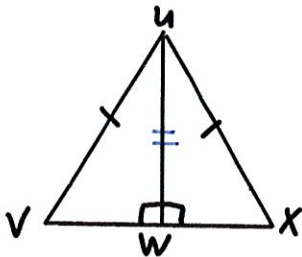
Statement	Reason
1. $\angle MLN \cong \angle ONL$	1. Given
2. $\angle OLN \cong \angle MNL$	2. Given
3. $\overline{LN} \cong \overline{NL}$	3. Reflexive Property (Given)
4. $\triangle LNO \cong \triangle NLM$	4. ASA \cong postulate

Problem 7:



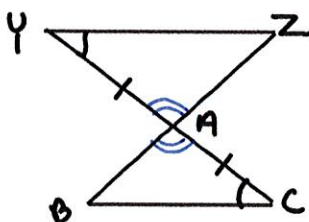
Statement	Reason
1. $\overline{PQ} \cong \overline{QS}$	1. Given
2. $\overline{QT} \cong \overline{QR}$	2. Given
3. $\angle PQT \cong \angle RQS$	3. Vertical \angle s Theorem
4. $\triangle PQT \cong \triangle RQS$	4. SAS \cong postulate

Problem 8:



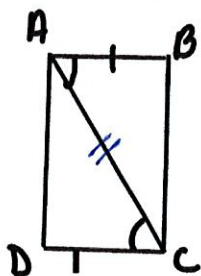
Statement	Reason
1. $\overline{UV} \cong \overline{UX}$	1. Given
2. $\angle VWU \cong \angle XWU$	2. Given
3. $\overline{UW} \cong \overline{UW}$	3. Reflexive Property
4. $\triangle UWV \cong \triangle UWX$	4. HL \cong postulate

Problem 9:



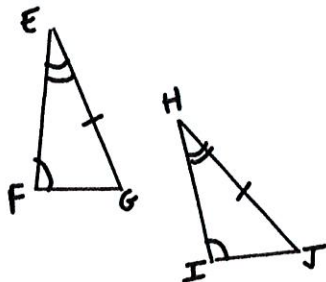
Statement	Reason
1. $\angle Y \cong \angle C$	1. given
2. $\overline{YA} \cong \overline{CA}$	2. Given
3. $\angle YAZ \cong \angle CAB$	3. Vertical \angle s Theorem
4. $\triangle YZA \cong \triangle ZCB$	4. ASA \cong postulate

Problem 10:



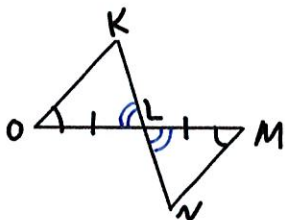
Statement	Reason
1. $\angle BAC \cong \angle DCA$	1. Given
2. $\overline{AB} \cong \overline{CD}$	2. Given
3. $\overline{AC} \cong \overline{CA}$	3. Reflexive property
4. $\triangle ABC \cong \triangle CDA$	4. SAS \cong postulate

Problem 11:



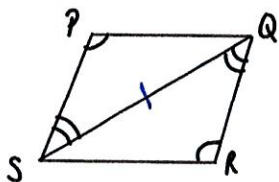
Statement	Reason
1. $\angle F \cong \angle I$	1. given
2. $\angle E \cong \angle H$	2. given
3. $\overline{EG} \cong \overline{HJ}$	3. given
4. $\triangle EFG \cong \triangle HIJ$	4. AAS

Problem 12:



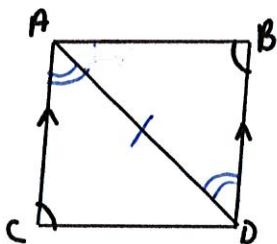
Statement	Reason
1. $\angle O \cong \angle M$	1. Given
2. $\overline{LO} \cong \overline{LM}$	2. Given
3. $\angle KLO \cong \angle NLM$	3. Vertical \angle s Theorem
4. $\triangle KLO \cong \triangle NLM$	4. ASA \cong postulate
5. $\angle K \cong \angle N$	5. CPCTC

Problem 13:



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

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 Theorem
4. $\overline{AD} \cong \overline{DA}$	4. Reflexive Property
5. $\triangle ACD \cong \triangle DBA$	5. AAS \cong postulate