

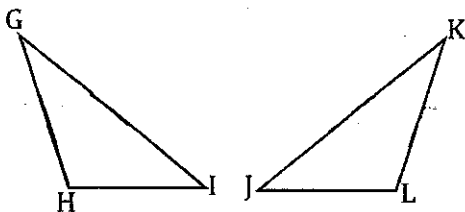
Proofs with CPCTC

Name _____

Fill in the missing information in each proof.

①

Given: $\overline{GH} \cong \overline{KL}$, $\angle G \cong \angle K$, and $\overline{GI} \cong \overline{KJ}$

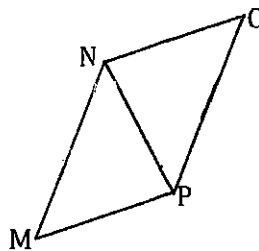


Prove: $\overline{HI} \cong \overline{LJ}$

Statements	Reasons
1. $\overline{GH} \cong \overline{KL}$	1. Given
2.	2. Given
3. $\overline{GI} \cong \overline{KJ}$	3.
4.	4. SAS
5. $\overline{HI} \cong \overline{LJ}$	5.

②

Given: $\angle MNP \cong \angle OPN$, and $\overline{MN} \cong \overline{OP}$

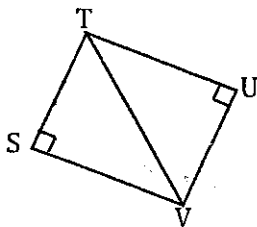


Prove: $\overline{MP} \cong \overline{NO}$

Statements	Reasons
1.	1. Given
2. $\overline{MN} \cong \overline{OP}$	2.
3. $\overline{NP} \cong \overline{NP}$	3.
4. $\triangle MNP \cong \triangle OPN$	4.
5.	5. CPCTC

③

Given: $\overline{ST} \cong \overline{VU}$

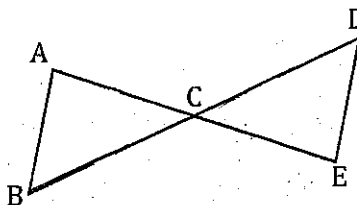


Prove: $\angle SVT \cong \angle UVU$

Statements	Reasons
1.	1. Given
2.	2. Reflexive Property
3.	3. HL
4. $\angle SVT \cong \angle UVU$	4.

④

Given: $\overline{AC} \cong \overline{CE}$, $\overline{DC} \cong \overline{BC}$

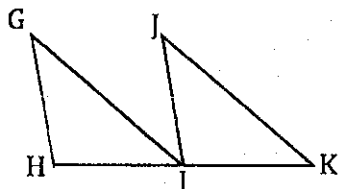


Prove: $\angle B \cong \angle D$

Statements	Reasons
1.	1.
2.	2. Given
3. $\angle ACB \cong \angle DCE$	3.
4. $\triangle ABC \cong \triangle CDE$	4.
5. $\angle B \cong \angle D$	5.

⑤

Given: $\overline{GH} \parallel \overline{JI}$, I is the midpoint of \overline{HK} and $\overline{GH} \cong \overline{JI}$

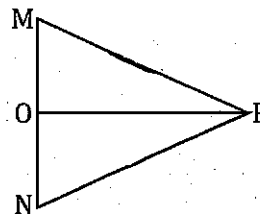


Prove: $\angle G \cong \angle J$

Statements	Reasons
1. $\overline{GH} \parallel \overline{JI}$	1.
2. I is the midpoint of \overline{HK}	2.
3.	3. Given
4. $\overline{HI} \cong \overline{IK}$	4.
5.	5. Corresponding
6.	6. SAS
7. $\angle G \cong \angle J$	7.

⑥

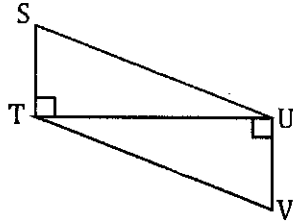
Given: $\overline{MP} \cong \overline{NP}$, $\overline{MN} \perp \overline{OP}$



Prove: $\overline{MO} \cong \overline{NO}$

Statements	Reasons
1.	1. Given
2. $\overline{MN} \perp \overline{OP}$	2.
3. $\overline{OP} \cong \overline{OP}$	3.
4. $\triangle MOP \cong \triangle NOP$	4.
5.	5.

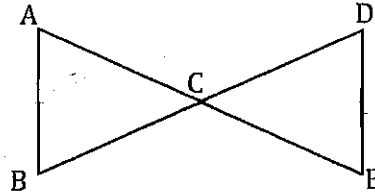
7 Given: $\overline{SU} \cong \overline{VT}$



Prove: $\overline{ST} \cong \overline{UV}$

Statements	Reasons
1. $\overline{SU} \cong \overline{VT}$	1.
2.	2.
3.	3. HL
4.	4. CPCTC

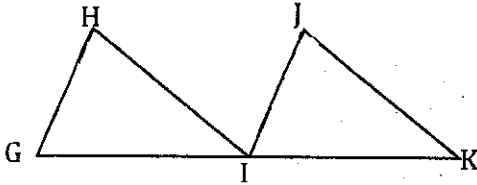
8 Given: $\overline{AB} \parallel \overline{DE}$, \overline{AE} bisects \overline{BD}



Prove: $\overline{AC} \cong \overline{EC}$

Statements	Reasons
1.	1.
2.	2. Given
3. $\angle ABC \cong \angle EDC$	3.
4. $\angle ACB \cong \angle DCE$	4.
5.	5. Def of Bisect
6. $\triangle ABC \cong \triangle EDC$	6.
7.	7.

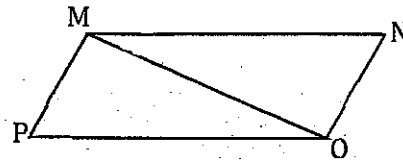
9 Given: $\overline{GH} \parallel \overline{IJ}$, $\angle H \cong \angle J$ and $\overline{GH} \cong \overline{IJ}$



Prove: $\angle GIH \cong \angle IKJ$

Statements	Reasons
1.	1. Given
2. $\angle H \cong \angle J$	2.
3.	3.
4.	4. Corresponding Angles
5.	5.
6.	6. CPCTC

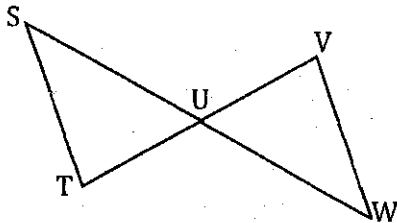
10 Given: $\overline{PM} \parallel \overline{NO}$, $\overline{MN} \parallel \overline{PO}$



Prove: $\overline{PM} \cong \overline{ON}$

Statements	Reasons
1. $\overline{PM} \parallel \overline{ON}$	1.
2.	2. Given
3. $\angle PMO \cong \angle NOM$	3.
4.	4. Alternate Interior
5. $\overline{MO} \cong \overline{MO}$	5.
6.	6. ASA
7.	7.

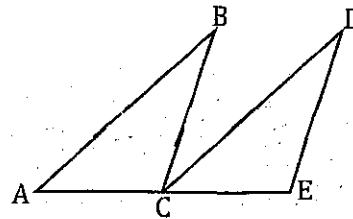
11 Given: $\overline{ST} \parallel \overline{VW}$, and $\overline{ST} \cong \overline{VW}$



Prove: $\overline{SU} \cong \overline{WU}$

Statements	Reasons
1.	1. Given
2.	2. Given
3.	3. Alternate Interior
4. $\angle SUT \cong \angle WUV$	4.
5.	5. AAS
6.	6.

12 Given: $\overline{AB} \cong \overline{CD}$, $\overline{BC} \cong \overline{DE}$, and $\overline{AC} \cong \overline{CE}$

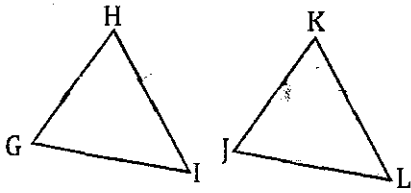


Prove: $\angle A \cong \angle DCE$

Statements	Reasons
1. $\overline{AB} \cong \overline{CD}$	1.
2. $\overline{BC} \cong \overline{DE}$	2.
3.	3. Given
4.	4.
5.	5.

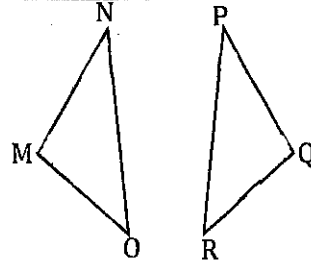
Write a two column proof for each.

13) Given: $\overline{GH} \cong \overline{JK}$, $\overline{HI} \cong \overline{KL}$, and $\overline{IG} \cong \overline{LJ}$



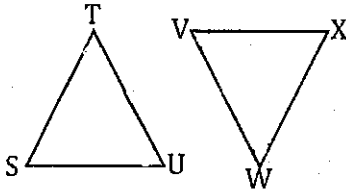
Prove: $\angle I \cong \angle L$

14) Given: $\angle N \cong \angle P$, $\angle M \cong \angle Q$, and $\overline{MO} \cong \overline{QR}$



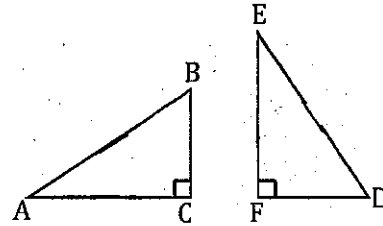
Prove: $\angle O \cong \angle R$

15) Given: $\angle U \cong \angle V$, $\angle T \cong \angle W$, and $\overline{TU} \cong \overline{VW}$



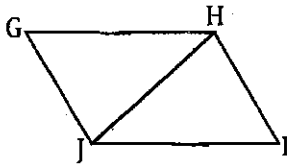
Prove: $\angle S \cong \angle X$

16) Given: $\overline{AC} \cong \overline{EF}$, and $\overline{AB} \cong \overline{ED}$



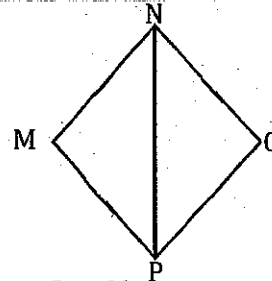
Prove: $\overline{BC} \cong \overline{FD}$

17) Given: $\overline{GH} \cong \overline{JI}$, $\angle GHJ \cong \angle IJH$



Prove: $\overline{GJ} \cong \overline{HI}$

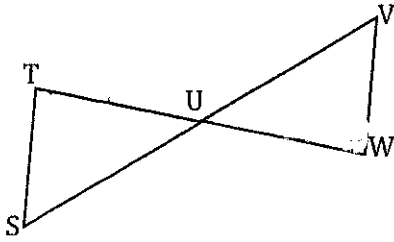
18) Given: $\overline{MN} \cong \overline{NO}$, $\overline{MP} \cong \overline{OP}$



Prove: $\angle O \cong \angle M$

19

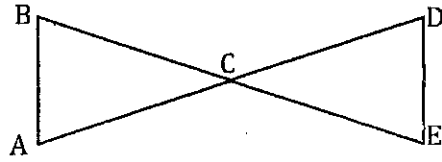
Given: $\overline{TU} \cong \overline{WU}$, $\angle T \cong \angle W$



Prove: $\overline{TS} \cong \overline{VW}$

20

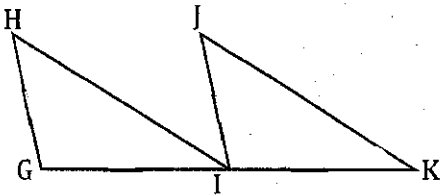
Given: $\overline{AB} \cong \overline{DE}$, $\angle B \cong \angle E$



Prove: $\overline{AC} \cong \overline{DC}$

21

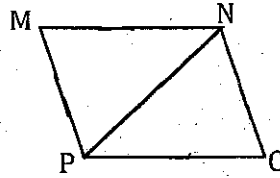
Given: $\overline{HG} \parallel \overline{JK}$, $\overline{GI} \cong \overline{IK}$, and $\angle HIG \cong \angle JKI$



Prove: $\angle H \cong \angle J$

22

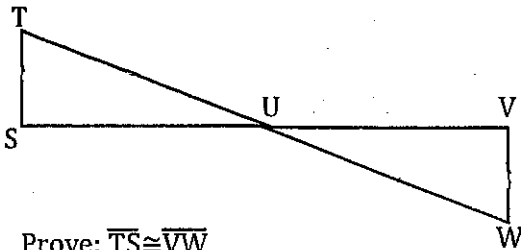
Given: $\overline{MN} \cong \overline{PO}$, $\overline{MP} \cong \overline{NO}$



Prove: $\angle M \cong \angle O$

23

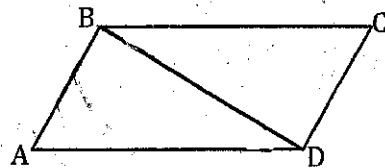
Given: $\overline{TS} \parallel \overline{VW}$, $\overline{TU} \cong \overline{WU}$



Prove: $\overline{TS} \cong \overline{VW}$

24

Given: $\overline{AB} \parallel \overline{DC}$, $\angle CBD \cong \angle ADB$



Prove: $\overline{BC} \cong \overline{AD}$