

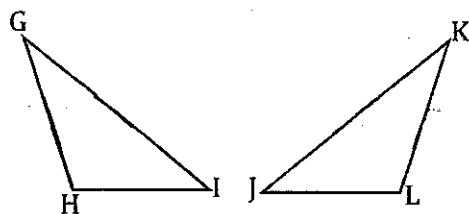
# Proofs with CPCTC

Name \_\_\_\_\_

Fill in the missing information in each proof.

①

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

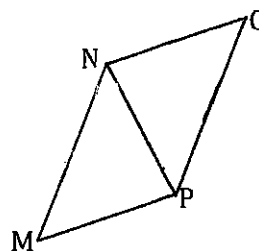


Prove:  $\overline{HI} \cong \overline{LI}$

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

②

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

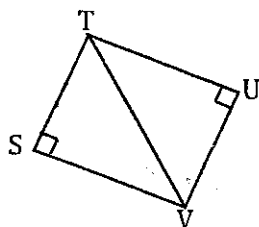


Prove:  $\overline{MP} \cong \overline{NO}$

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

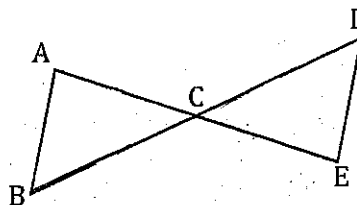


Prove:  $\angle SVT \cong \angle UTV$

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

④

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

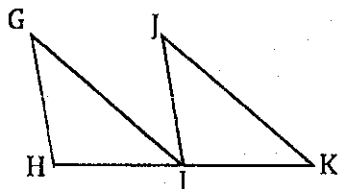


Prove:  $\angle B \cong \angle D$

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

⑤

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

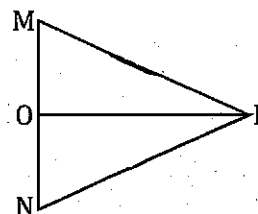


Prove:  $\angle G \cong \angle J$

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

⑥

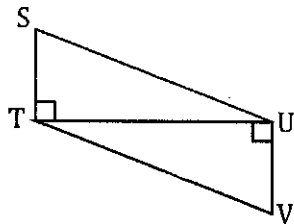
Given:  $\overline{MP} \cong \overline{NP}$ ,  $\overline{MN} \perp \overline{OP}$



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.

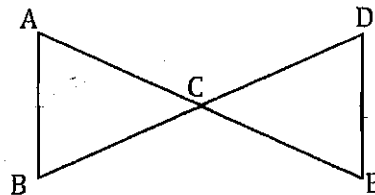
⑦ Given:  $\overline{SU} \cong \overline{VT}$



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

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

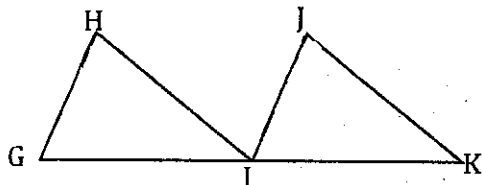
⑧ Given:  $\overline{AB} \parallel \overline{DE}$ ,  $\overline{AE}$  bisects  $\overline{BD}$



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.

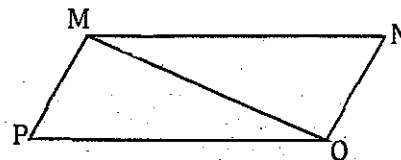
⑨ Given:  $\overline{GH} \parallel \overline{IJ}$ ,  $\angle H \cong \angle J$  and  $\overline{GH} \cong \overline{IJ}$



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

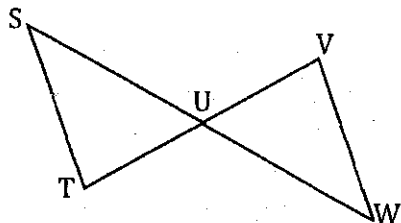
⑩ Given:  $\overline{PM} \parallel \overline{NO}$ ,  $\overline{MN} \parallel \overline{PO}$



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.

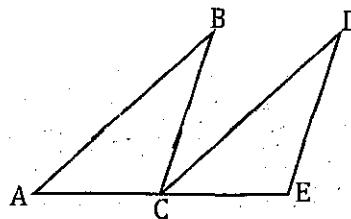
⑪ Given:  $\overline{ST} \parallel \overline{WV}$ , and  $\overline{ST} \cong \overline{WV}$



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  $\overline{AC} \cong \overline{CE}$

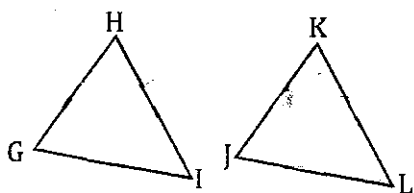


Prove:  $\angle A \cong \angle DCE$

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

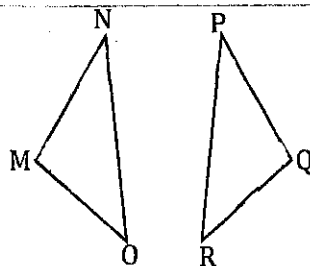
Write a two column proof for each.

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



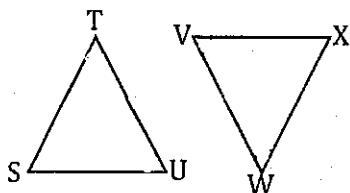
Prove:  $\angle I \cong \angle L$

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



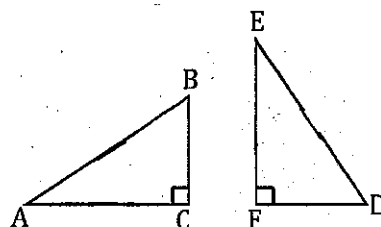
Prove:  $\angle O \cong \angle R$

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



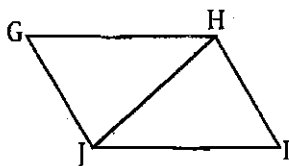
Prove:  $\angle S \cong \angle X$

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



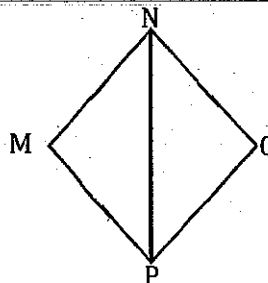
Prove:  $\overline{BC} \cong \overline{FD}$

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



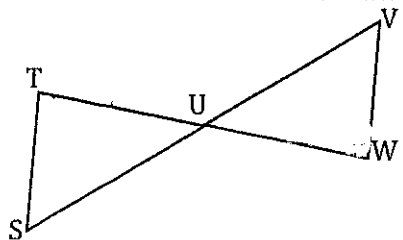
Prove:  $\overline{GJ} \cong \overline{HI}$

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

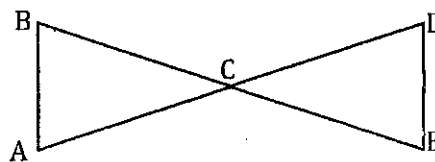


Prove:  $\angle O \cong \angle M$

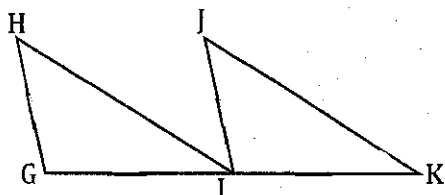
(19)

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

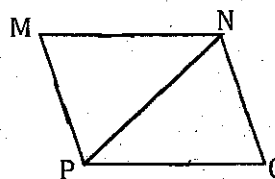
(20)

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

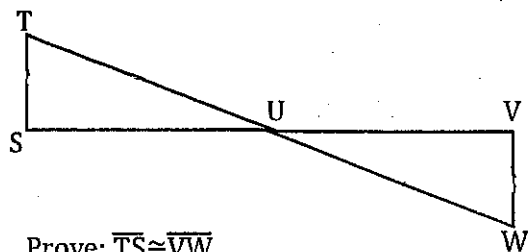
(21)

Given:  $\overline{HG} \parallel \overline{JI}$ ,  $\overline{GI} \cong \overline{IK}$ , and  $\angle HIG \cong \angle JKI$ Prove:  $\angle H \cong \angle J$ 

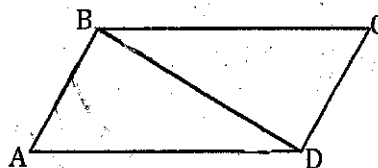
(22)

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:  $\overline{TS} \cong \overline{WV}$ 

(24)

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