

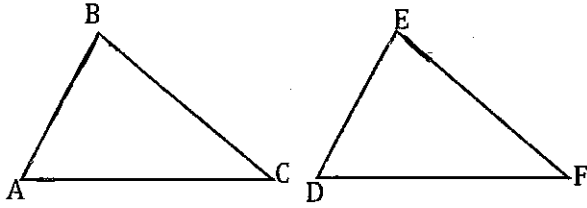
Congruent Triangle Proofs

Name _____

For these fill in any missing statements or reasons.

1.

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

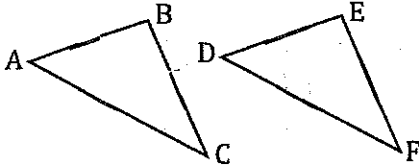


Prove: $\triangle ABC \cong \triangle DEF$

Statements	Reasons
1. $\overline{AB} \cong \overline{DE}$	1. Given
2.	2. Given
3. $\angle A \cong \angle D$	3.
4. $\triangle ABC \cong \triangle DEF$	4.

3.

Given: $\overline{AB} \cong \overline{DE}$, $\overline{AC} \cong \overline{DF}$, and $\overline{BC} \cong \overline{EF}$

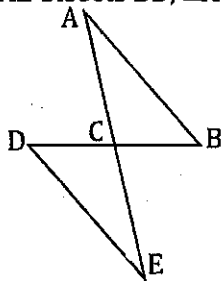


Prove: $\triangle ABC \cong \triangle DEF$

Statements	Reasons
1. $\overline{AB} \cong \overline{DE}$	1.
2.	2.
3.	3.
4.	4. SSS

5.

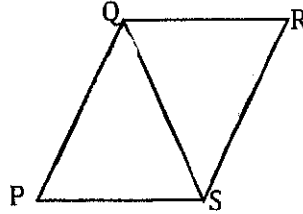
Given: \overline{AE} bisects \overline{BD} , $\angle A \cong \angle E$



Prove: $\triangle ABC \cong \triangle EDC$

Statements	Reasons
1. $\angle A \cong \angle E$	1.
2.	2. Given
3.	3. Definition of Bisect
4. $\angle ACB \cong \angle DCE$	4.
5. $\triangle ABC \cong \triangle EDC$	5.

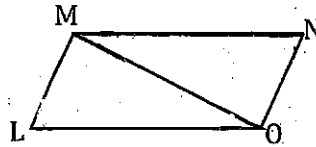
2. Given: $\overline{PQ} \cong \overline{RS}$, and $\angle PQS \cong \angle RSQ$



Prove: $\triangle PQS \cong \triangle RSQ$

Statements	Reasons
1.	1. Given
2.	2. Given
3. $\overline{QS} \cong \overline{QS}$	3.
4. $\triangle PQS \cong \triangle RSQ$	4.

4. Given: $\angle L \cong \angle N$, $\angle LOM \cong \angle NMO$

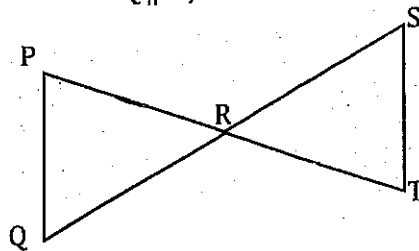


Prove: $\triangle LMO \cong \triangle NOM$

Statements	Reasons
1.	1.
2.	2. Given
3.	3. Reflexive Property
4. $\triangle LMO \cong \triangle NOM$	4.

6.

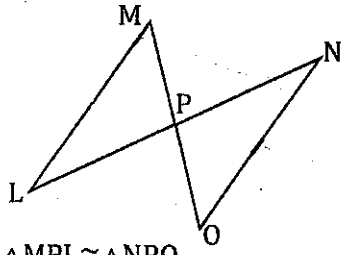
Given: $\overline{PQ} \parallel \overline{ST}$, $\overline{PR} \cong \overline{TR}$



Prove: $\triangle PQR \cong \triangle TSR$

Statements	Reasons
1. $\overline{PR} \cong \overline{TR}$	1.
2.	2. Given
3. $\angle P \cong \angle T$	3.
4. $\angle PRQ \cong \angle TRS$	4.
5.	5. ASA

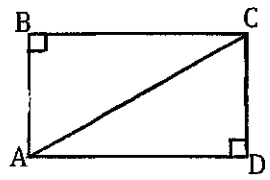
7. Given: $\overline{LM} \cong \overline{NO}$, and $\angle M \cong \angle O$



Prove: $\triangle MPL \cong \triangle NPO$

Statements	Reasons
1. $\overline{LM} \cong \overline{NO}$	1.
2.	2. Given
3.	3.
4.	4. AAS

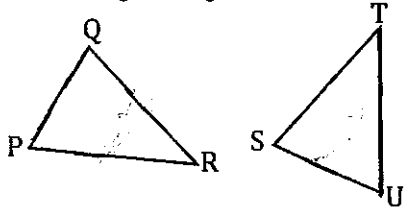
8. Given: $\overline{AB} \cong \overline{DC}$



Prove: $\triangle ABC \cong \triangle CDA$

Statements	Reasons
1.	1. Given
2. $\overline{AC} \cong \overline{AC}$	2.
3. $\triangle ABC \cong \triangle CDA$	3.

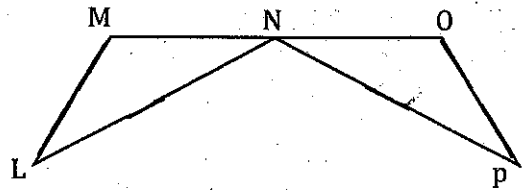
9. Given: $\overline{PQ} \cong \overline{SU}$, $\overline{QR} \cong \overline{ST}$, and $\overline{PR} \cong \overline{TU}$



Prove: $\triangle PQR \cong \triangle STU$

Statements	Reasons
1.	1. Given
2.	2. Given
3.	3.
4. $\triangle PQR \cong \triangle STU$	4.

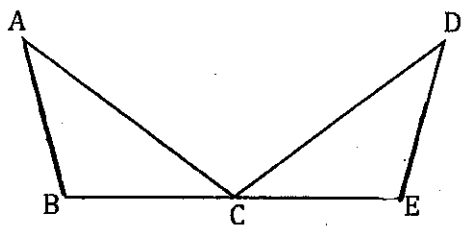
10. Given: N is the midpoint of \overline{MO} , $\overline{LM} \cong \overline{OP}$, and $\overline{LN} \cong \overline{PN}$



Prove: $\triangle LMN \cong \triangle PON$

Statements	Reasons
1. $\overline{LM} \cong \overline{OP}$	1. Given
2. $\overline{LN} \cong \overline{PN}$	2.
3. N is the Midpoint of \overline{MO}	3. Given
4.	4. Midpoint
5.	5. SSS

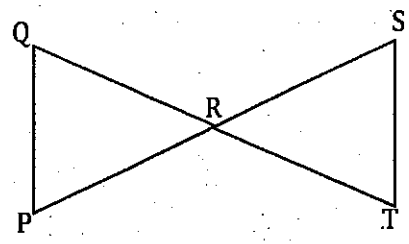
11. Given: C is the midpoint of \overline{BE} , $\angle B \cong \angle E$, and $\overline{AB} \cong \overline{DE}$



Prove: $\triangle ABC \cong \triangle DEC$

Statements	Reasons
1. $\angle B \cong \angle E$	1.
2. $\overline{AB} \cong \overline{DE}$	2.
3.	3. Given
4.	4. Midpoint
5. $\triangle ABC \cong \triangle DEC$	5. SAS

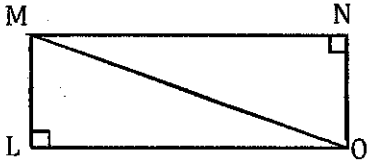
12. Given: \overline{QT} bisects \overline{SP} , \overline{SP} bisects \overline{QT}



Prove: $\triangle QRP \cong \triangle SRT$

Statements	Reasons
1. \overline{QT} bisects \overline{SP}	1. Given
2.	2. Given
3. $\overline{QR} \cong \overline{TR}$	3. Definition of Bisect
4. $\overline{PR} \cong \overline{SR}$	4.
5.	5. Vertical Angles
6. $\triangle QRP \cong \triangle SRT$	6.

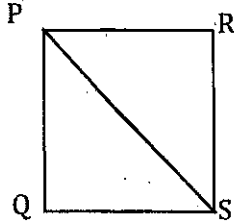
13. Given: $\overline{LM} \cong \overline{NO}$



Prove: $\triangle LMO \cong \triangle NOM$

Statements	Reasons
1. $\overline{LM} \cong \overline{NO}$	1.
2.	2.
3.	3.

15. Given: $\overline{PR} \parallel \overline{QS}$, $\angle QPS \cong \angle RSP$

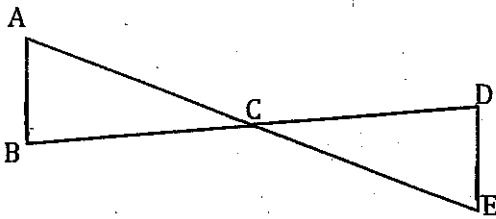


Prove: $\triangle PQS \cong \triangle SRP$

Statements	Reasons
1. $\overline{PR} \parallel \overline{QS}$	1.
2. $\angle QPS \cong \angle RSP$	2.
3. $\angle PSQ \cong \angle SPR$	3. Alternate Interior
4.	4. Reflexive Property
5. $\triangle PQS \cong \triangle SRP$	5.

17.

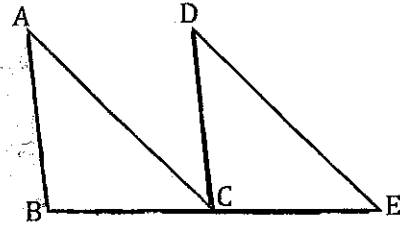
Given: \overline{AE} bisects \overline{BD} , $\overline{AB} \parallel \overline{DE}$



Prove: $\triangle ABC \cong \triangle EDC$

Statements	Reasons
1. \overline{AE} bisects \overline{BD}	1.
2.	2. Given
3. $\overline{BC} \cong \overline{DC}$	3.
4. $\angle ACB \cong \angle DCE$	4.
5.	5. Alternate Interior
6.	6. ASA

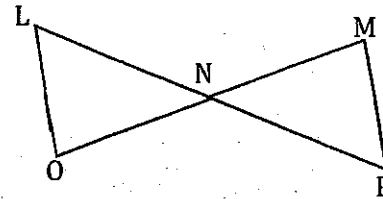
14. Given: $\overline{AB} \cong \overline{DC}$, $\overline{AB} \parallel \overline{DC}$, and $\overline{BC} \cong \overline{CE}$



Prove: $\triangle ABC \cong \triangle DCE$

Statements	Reasons
1. $\overline{AB} \cong \overline{DC}$	1. Given
2.	2. Given
3.	3. Given
4.	4. Corresponding Angles
5. $\triangle ABC \cong \triangle DCE$	5.

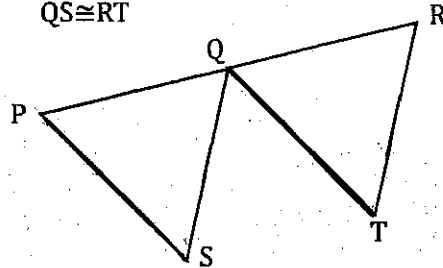
16. Given: \overline{LP} bisects \overline{MO} , $\overline{LO} \parallel \overline{MP}$



Prove: $\triangle LNO \cong \triangle MNP$

Statements	Reasons
1.	1. Given
2.	2. Given
3. $\overline{ON} \cong \overline{MN}$	3.
4.	4. Alternate Interior
5.	5. Vertical Angles
6.	6. ASA

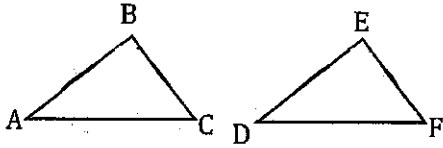
18. Given: Q is the midpoint of \overline{PR} , $\overline{PS} \cong \overline{QT}$ and $\overline{QS} \cong \overline{RT}$



Prove: $\triangle PQS \cong \triangle QRT$

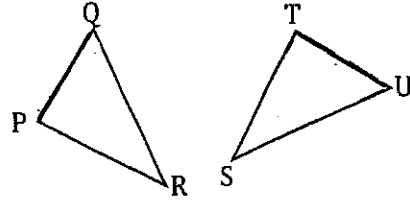
Statements	Reasons
1.	1. Given
2.	2. Given
3. $\overline{QS} \cong \overline{RT}$	3.
4.	4. Midpoint
5. $\triangle PQS \cong \triangle QRT$	5.

19. Given: $\overline{AB} \cong \overline{DE}$, $\overline{BC} \cong \overline{EF}$, and $\angle B \cong \angle E$



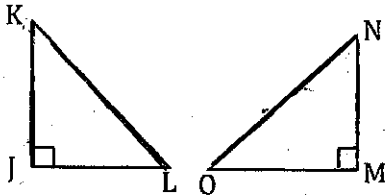
Prove: $\triangle ABC \cong \triangle DEF$

20. Given: $\overline{PQ} \cong \overline{TU}$, $\angle P \cong \angle T$, and $\angle Q \cong \angle U$



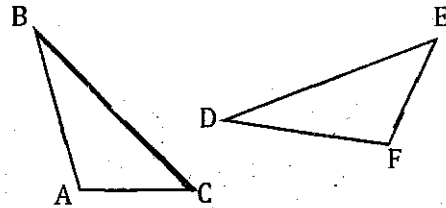
Prove: $\triangle PQR \cong \triangle TUS$

21. Given: $JK \cong MN$, $KL \cong NO$



Prove: $\triangle JKL \cong \triangle MNO$

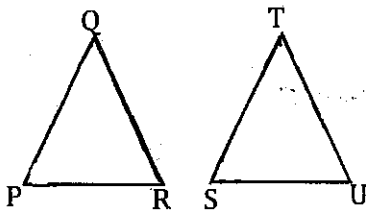
22. Given: $\overline{AB} \cong \overline{DF}$, $\overline{BC} \cong \overline{DE}$, and $\overline{AC} \cong \overline{EF}$



Prove: $\triangle ABD \cong \triangle FDE$

23.

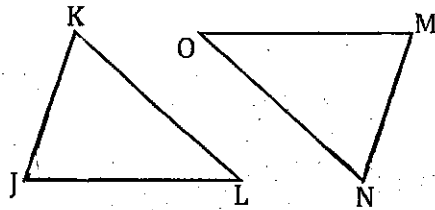
Given: $\angle P \cong \angle S$, $\angle Q \cong \angle T$, and $\overline{QR} \cong \overline{TU}$



Prove: $\triangle PQR \cong \triangle STU$

24.

Given: $\angle J \cong \angle M$, $\overline{JK} \cong \overline{MN}$ and $\angle K \cong \angle N$



Prove: $\triangle JKL \cong \triangle MNO$