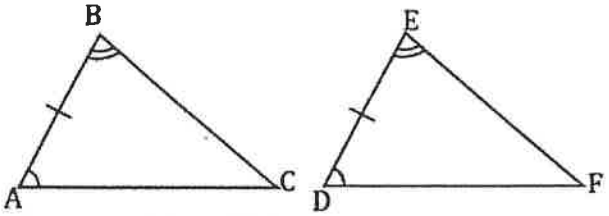
For these fill in any missing statements or reasons.

1.

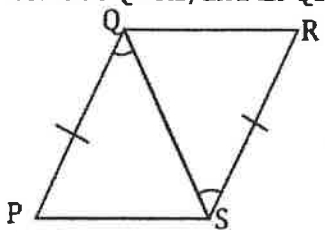
Given: $\overline{AB}\cong\overline{DE}$, $\angle B\cong\angle E$, and $\angle A\cong\angle D$



Prove: $\triangle ABC\cong\triangle DBC$

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.

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

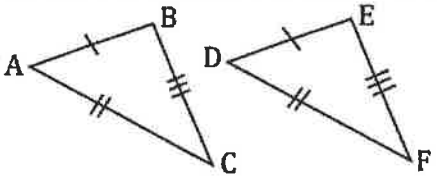


Prove: $\triangle ABC\cong\triangle DBC$

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

3.

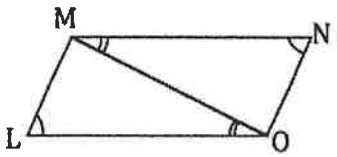
Given: $\overline{AB}\cong\overline{DE}$, $\overline{AC}\cong\overline{DF}$, and $\overline{BC}\cong\overline{EF}$



Prove: $\triangle ABD\cong\triangle DEF$

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

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

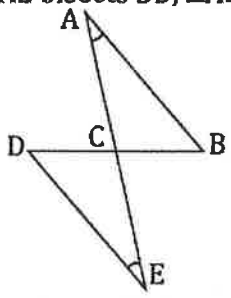


Prove: $\triangle LMO\cong\triangle NOM$

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

5.

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

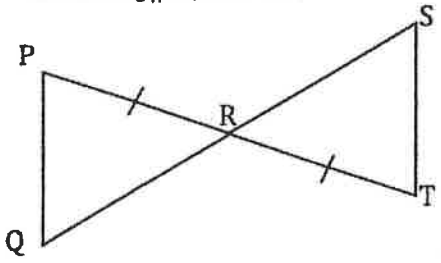


Prove: $\triangle ABC\cong\triangle EDC$

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.

6.

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



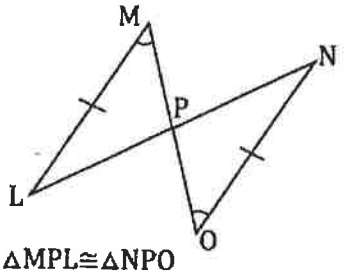
Prove: $\triangle PQR\cong\triangle TSR$

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

Geometry
Congruent Triangles Proof (2)

Name _____
Date _____ Period _____

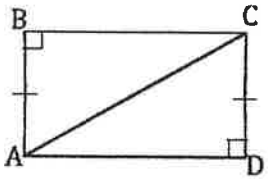
7. Given: $\overline{LM}\cong\overline{NO}$, and $\angle M\cong\angle O$



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

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

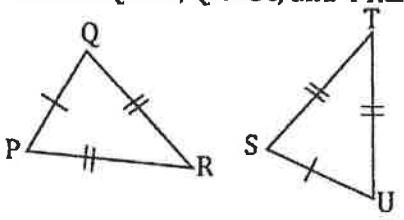
8. Given: $\overline{AB}\cong\overline{DC}$



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.

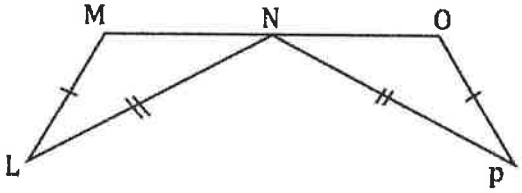
9. Given: $\overline{PQ}\cong\overline{SU}$, $\overline{QR}\cong\overline{ST}$, and $\overline{PR}\cong\overline{TU}$



Prove: $\triangle PQR\cong\triangle UST$

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

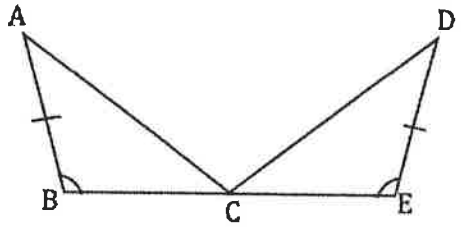
10. Given: N is the midpoint of $\overline{MO}$, $\overline{LM}\cong\overline{OP}$, and $\overline{LN}\cong\overline{PN}$



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

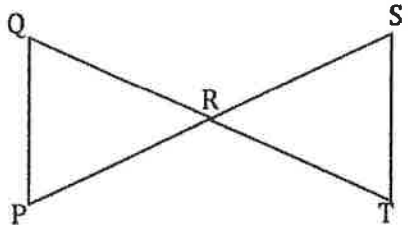
11. Given: C is the midpoint of $\overline{BE}$, $\angle B\cong\angle E$, and $\overline{AB}\cong\overline{DE}$



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

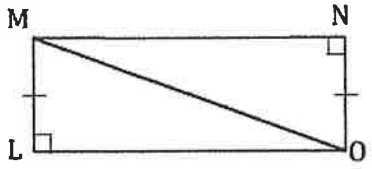
12. Given: $\overline{QT}$ bisects $\overline{SP}$, $\overline{SP}$ bisects $\overline{QT}$



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.

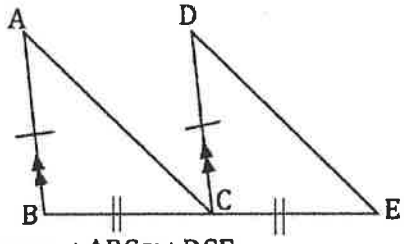
13. Given: $\overline{LM} \cong \overline{NO}$



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

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

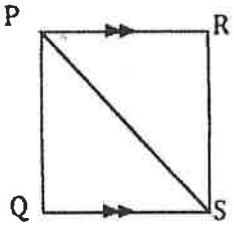
14. Given: $\overline{AB} \cong \overline{DC}$, $\overline{AB} \parallel \overline{DC}$, and $\overline{BC} \cong \overline{CE}$



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.

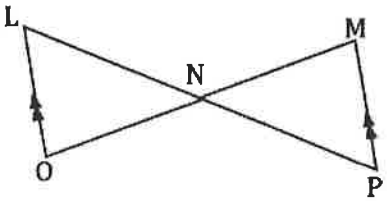
15. Given: $\overline{PR} \parallel \overline{QS}$, $\angle QPS \cong \angle RSP$



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. $\triangle ABD \cong \triangle CDB$	5.

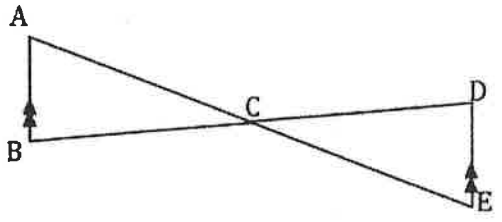
16. Given: $\overline{LP}$ bisects $\overline{MO}$, $\overline{LO} \parallel \overline{MP}$



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

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

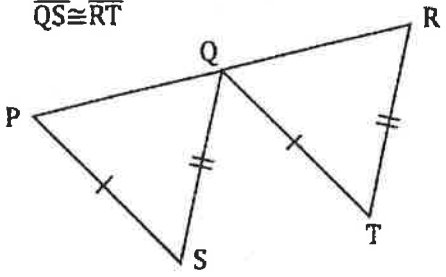
17. Given: $\overline{AE}$ bisects $\overline{BD}$, $\overline{AB} \parallel \overline{DE}$



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

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

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



Prove: $\triangle PQS \cong \triangle RQT$

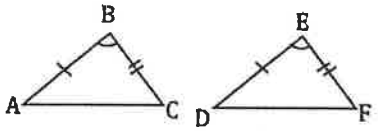
Statements	Reasons
1.	1. Given
2.	2. Given
3. $\overline{QS} \cong \overline{RT}$	3.
4.	4. Midpoint
5. $\triangle ABC \cong \triangle DBC$	5.

Geometry
Congruent Triangles Proof (3)

Name _____
Date _____ Period _____

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

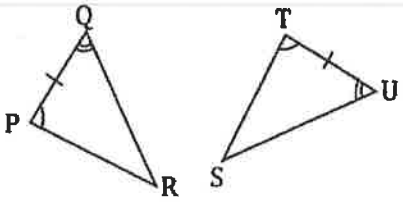
Prove: $\Delta ABC \cong \Delta DEF$



Statements	Reasons

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

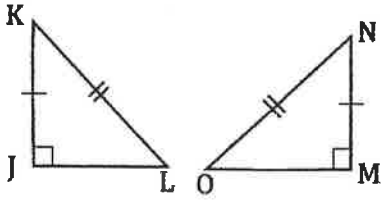
Prove: $\Delta PQR \cong \Delta TUS$



Statements	Reasons

21) Given: $\overline{JK} \cong \overline{MN}$, $\overline{KL} \cong \overline{NO}$

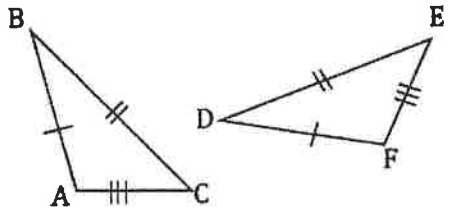
Prove: $\Delta JKL \cong \Delta MNO$



Statements	Reasons

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

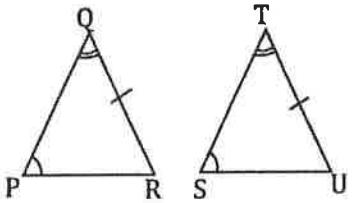
Prove: $\Delta ABD \cong \Delta FDE$



Statements	Reasons

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

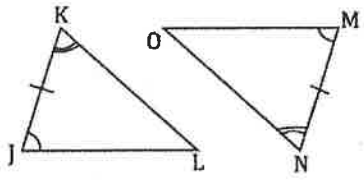
Prove: $\Delta PQR \cong \Delta STU$



Statements	Reasons

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

Prove: $\Delta JKL \cong \Delta MNO$



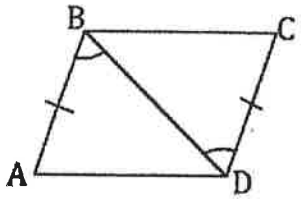
Statements	Reasons

Geometry
Congruent Triangles Proof (4)

Name _____
Date_____ Period _____

25) Given: $\overline{AB} \cong \overline{CD}$, $\angle ABD \cong \angle CDB$

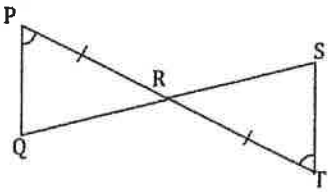
Prove: $\Delta ABD \cong \Delta CDB$



Statements	Reasons

26) Given: $\overline{PR} \cong \overline{TR}$, $\angle P \cong \angle T$

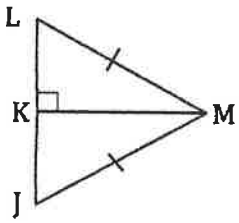
Prove: $\Delta PQR \cong \Delta TSR$



Statements	Reasons

27) Given: $\overline{LM} \cong \overline{JM}$

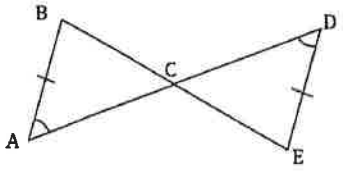
Prove: $\Delta LKM \cong \Delta JKM$



Statements	Reasons

28) Given: $\overline{AB} \cong \overline{ED}$, $\angle A \cong \angle D$

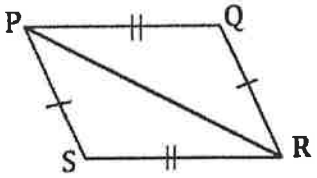
Prove: $\Delta ABC \cong \Delta DCE$



Statements	Reasons

29) Given: $\overline{PS} \cong \overline{QR}$, $\overline{PQ} \cong \overline{SR}$

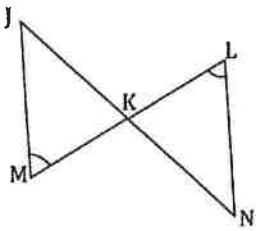
Prove: $\Delta PRS \cong \Delta RPQ$



Statements	Reasons

30) Given: $\overline{JN}$ bisects $\overline{ML}$, $\angle M \cong \angle L$

Prove: $\Delta MJK \cong \Delta LNK$



Statements	Reasons