Triangle Congruence Proofs

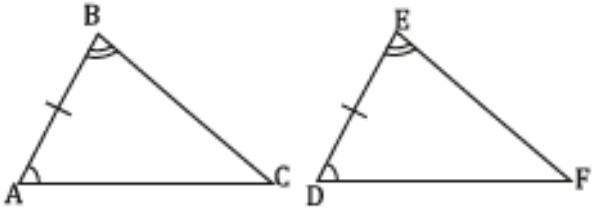
Complete the following proofs. If marked with a star* complete the proof as a paragraph proof.

Name_____

For these fill in any missing statements or reasons.

1.

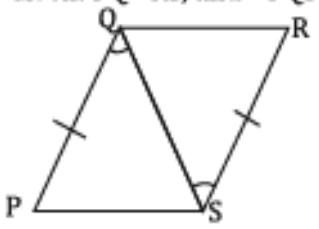
Given: $\overline{AB}\cong\overline{DE}$, $\angle B\cong\angle E$, and $\angle A\cong\angle D$



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

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 $\angle PQS\cong\angle RSQ$

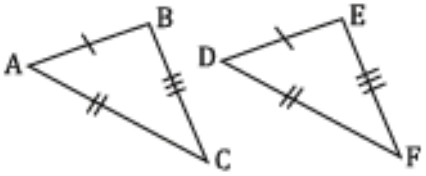


Prove: $\triangle ABC\cong\triangle DBC$

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

3.

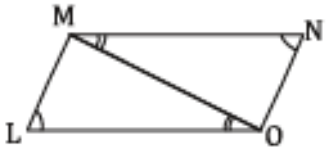
Given: $\overline{AB}\cong\overline{DE}$, $\overline{AC}\cong\overline{DF}$, and $\overline{BC}\cong\overline{EF}$



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

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

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

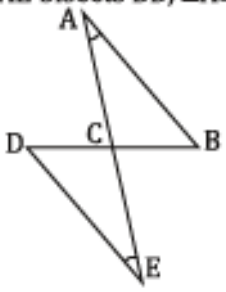


Prove: $\triangle LMO\cong\triangle NOM$

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

5.

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

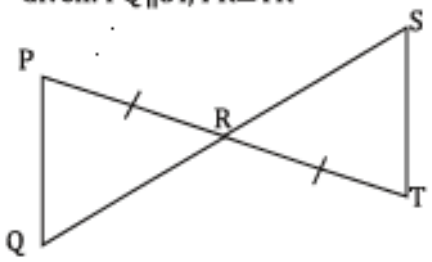


Prove: $\triangle ABC\cong\triangle EDC$

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. $\angle ACB\cong\angle DCE$	4.
5.	5. ASA

Triangle Congruence Proofs

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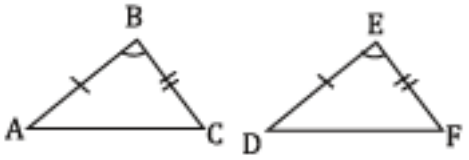
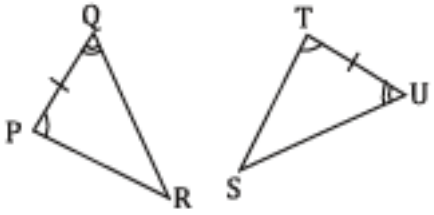
19. Given: $\overline{AB} \cong \overline{DE}$, $\overline{BC} \cong \overline{EF}$, and $\angle B \cong \angle E$



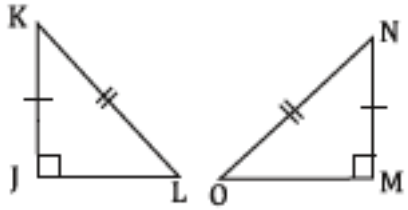
Prove: $\triangle ABC \cong \triangle DEF$

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



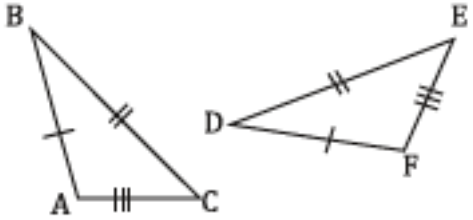
Prove: $\triangle PQR \cong \triangle TUS$

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



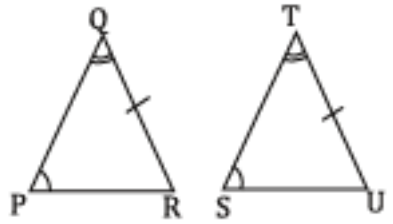
Prove: $\triangle JKL \cong \triangle MNO$

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



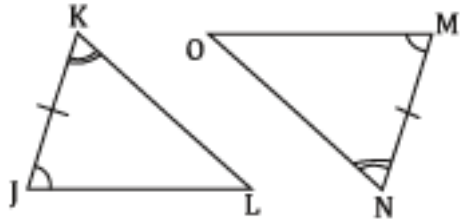
Prove: $\triangle ABD \cong \triangle FDE$

*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 $\angle K \cong \angle N$

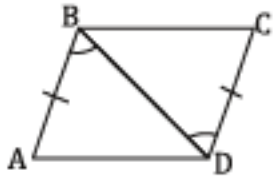


Prove: $\triangle JKL \cong \triangle MNO$

Triangle Congruence Proofs

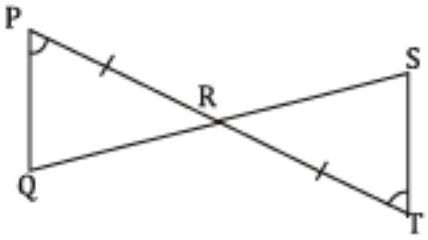
Complete the following proofs. If marked with a star* complete the proof as a paragraph proof.

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



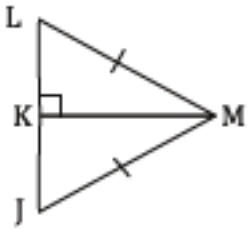
Prove: $\triangle ABD \cong \triangle CDB$

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



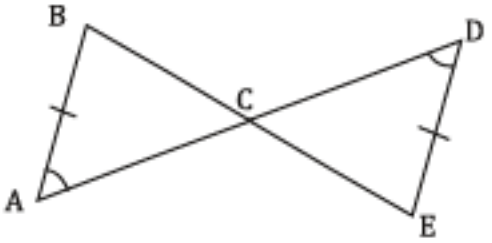
Prove: $\triangle ABC \cong \triangle DBC$

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



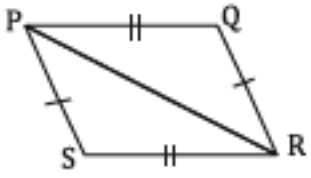
Prove: $\triangle LKM \cong \triangle JKM$

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



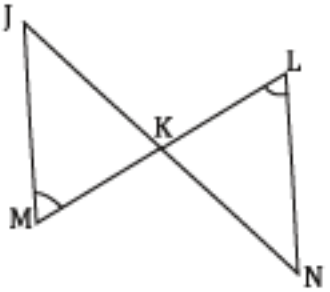
Prove: $\triangle ABC \cong \triangle DCE$

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



Prove: $\triangle PRS \cong \triangle RPQ$

30. Given: $\overline{JN}$ Bisects $\overline{ML}$, $\angle M \cong \angle L$

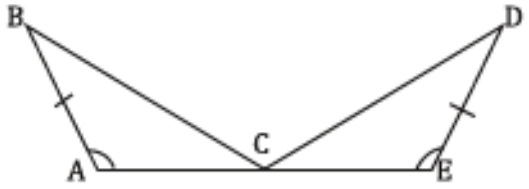


Prove: $\triangle MJK \cong \triangle LNK$

Triangle Congruence Proofs

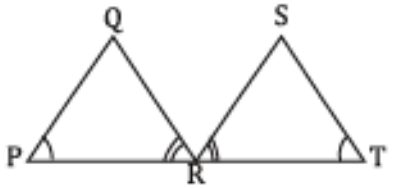
Complete the following proofs. If marked with a star* complete the proof as a paragraph proof.

31. Given: C is the midpoint of $\overline{AE}$, $\overline{BA} \cong \overline{DE}$, and $\angle A \cong \angle E$



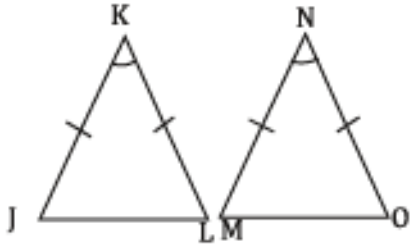
Prove: $\triangle ABC \cong \triangle EDC$

* 32. Given: R is the midpoint of $\overline{PT}$, $\angle P \cong \angle T$, and $\angle PRQ \cong \angle TRS$



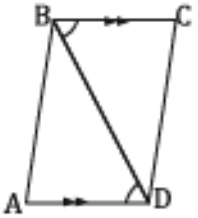
Prove: $\triangle PQR \cong \triangle TSR$

33. Given: $\angle K \cong \angle N$, $\overline{JK} \cong \overline{MN}$, $\overline{KL} \cong \overline{NO}$



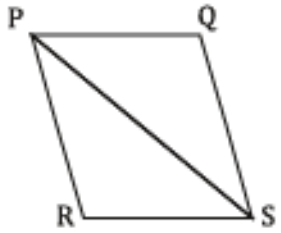
Prove: $\triangle JKL \cong \triangle MNO$

34. Given: $\overline{BA} \| \overline{CD}$ $\angle ADB \cong \angle CBD$



Prove: $\triangle ABD \cong \triangle CDB$

* 35. Given: PQRS is a parallelogram



Prove: $\triangle RPS \cong \triangle QSP$

36. Given: $\overline{KN}$ bisects $\overline{JM}$, $\overline{JK} \| \overline{MN}$

Prove: $\triangle JKL \cong \triangle MNL$