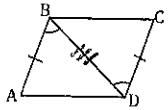


Answers to Station 3 - Triangle Congruences (ID: 1)

- | | | | |
|--|---|---|---|
| 1) SAS | 2) HL | 3) AAS | 4) HL |
| 5) ASA | 6) SAS | 7) SAS | 8) AAS |
| 9) AAS | 10) HL | 11) $\overline{IH} \cong \overline{VW}$ | 12) $\angle I \cong \angle Q$ |
| 13) $\overline{WV} \cong \overline{WP}$ | 14) $\overline{KJ} \cong \overline{DJ}$ | 15) $\angle G \cong \angle V$ | 16) $\overline{MN} \cong \overline{ST}$ |
| 17) $\overline{JK} \cong \overline{AB}$ or $\overline{LJ} \cong \overline{CA}$ | 18) $\overline{ST} \cong \overline{ED}$ | 19) $\angle JHI \cong \angle FHI$ | |
| 20) $\angle Q \cong \angle J$ | | | |

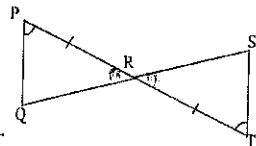
25. Given: $\overline{AB} \cong \overline{CD}$, $\angle ABD \cong \angle CDB$



Prove: $\triangle ABD \cong \triangle CDB$
 $\overline{AB} \cong \overline{CD}$
 $\angle ABD \cong \angle CDB$
 $\overline{BD} \cong \overline{BD}$
 $\triangle \cong \triangle$

Given
 Given
 Reflexive
 SAS

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

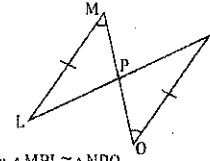


Prove: $\triangle PQR \cong \triangle TRS$

$\overline{PR} \cong \overline{TR}$
 $\angle P \cong \angle T$
 $\angle PQR \cong \angle TRS$
 $\triangle \cong \triangle$

Given
 Given
 VA
 ASA

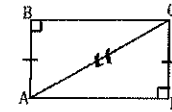
7. Given: $\overline{LM} \cong \overline{NO}$, and $\angle M \cong \angle O$



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

Statements	Reasons
1. $\overline{LM} \cong \overline{NO}$	1. Given
2. $\angle M \cong \angle O$	2. Given
3. $\angle MPO \cong \angle OPN$	3. VA
4. $\triangle MPL \cong \triangle NPO$	4. AAS

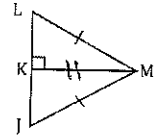
8. Given: $\overline{AB} \cong \overline{DC}$



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

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

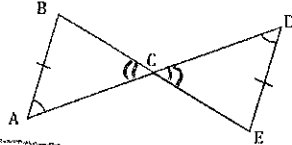
27. Given: $\overline{LM} \cong \overline{JM}$



Prove: $\triangle LKM \cong \triangle JKM$
 $\overline{LM} \cong \overline{JM}$
 $\angle LKM \cong \angle JKM$
 $\overline{KM} \cong \overline{KM}$
 $\triangle \cong \triangle$

Given
 Given
 Reflexive
 HL

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

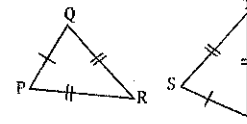


Prove: $\triangle ABC \cong \triangle EDC$

$\overline{AB} \cong \overline{ED}$
 $\angle A \cong \angle D$
 $\angle BCA \cong \angle ECD$
 $\triangle \cong \triangle$

Given
 Given
 VA
 AAS

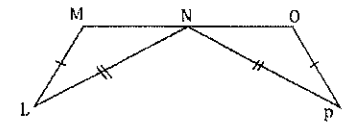
9. Given: $\overline{PQ} \cong \overline{SU}$, $\overline{QR} \cong \overline{ST}$, and $\overline{PR} \cong \overline{TU}$



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

Statements	Reasons
1. $\overline{PQ} \cong \overline{SU}$	1. Given
2. $\overline{QR} \cong \overline{ST}$	2. Given
3. $\overline{PR} \cong \overline{TU}$	3. Given
4. $\triangle PQR \cong \triangle STU$	4. SSS

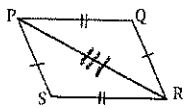
10. Given: N is the midpoint of \overline{MO} , $\overline{LM} \cong \overline{OP}$, and $\overline{LN} \cong \overline{PN}$



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

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

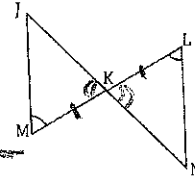
29. Given: $\overline{PS} \cong \overline{QR}$, $\overline{PQ} \cong \overline{SR}$



Prove: $\triangle PRS \cong \triangle RPQ$
 $\overline{PS} \cong \overline{QR}$
 $\overline{PQ} \cong \overline{SR}$
 $\overline{PR} \cong \overline{RP}$
 $\triangle \cong \triangle$

Given
 Reflexive
 SSS

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

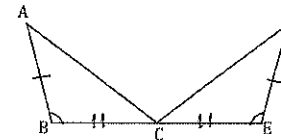


Prove: $\triangle MJK \cong \triangle LNK$

$\overline{JM} \cong \overline{LN}$
 \overline{JN} bisects \overline{ML}
 $\overline{MK} \cong \overline{LK}$
 $\angle MJK \cong \angle LNK$
 $\overline{KN} \cong \overline{KN}$
 $\triangle \cong \triangle$

Given
 Given
 Def of Bisect
 VA
 ASA

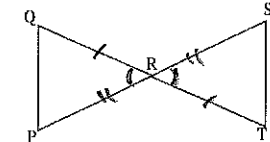
11. Given: C is the midpoint of \overline{BE} , $\angle B \cong \angle E$, and $\overline{AB} \cong \overline{DE}$



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

Statements	Reasons
1. $\angle B \cong \angle E$	1. Given
2. $\overline{AB} \cong \overline{DE}$	2. Given
3. $\overline{BC} \cong \overline{EC}$	3. Given
4. $\overline{BC} \cong \overline{EC}$	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. \overline{SR} bisects \overline{QT}	2. Given
3. $\overline{QR} \cong \overline{TR}$	3. Definition of Bisect
4. $\overline{PR} \cong \overline{SR}$	4. Ref of Bisect
5. $\angle QRP \cong \angle SRT$	5. Vertical Angles
6. $\triangle QRP \cong \triangle SRT$	6. SAS