

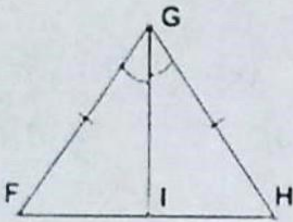
Name - Key

Period - _____

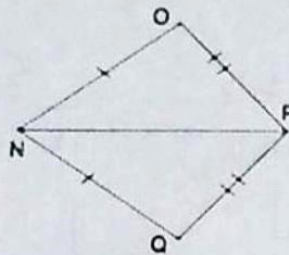
Triangle Congruence Worksheet

For each pair of triangles, state the postulate or theorem that can be used to conclude that the triangles are congruent.

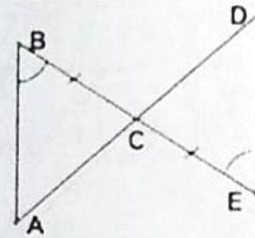
1. SAS



2. SSS



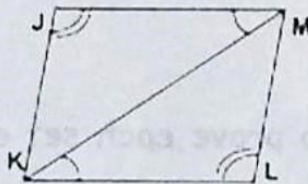
3. ASA



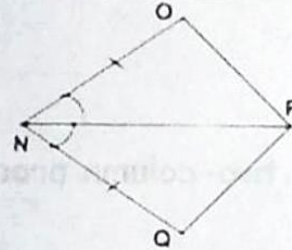
4. ASA



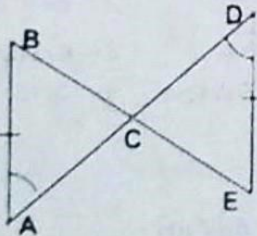
5. AAS



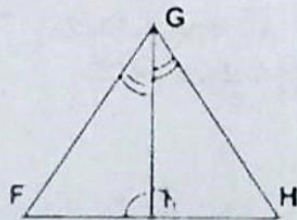
6. SAS



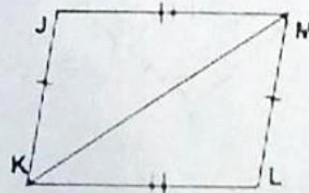
7. AAS



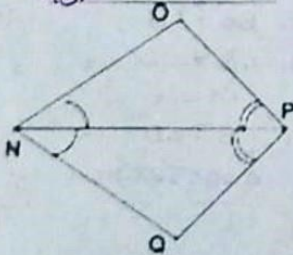
8. ASA



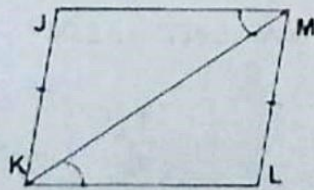
9. SSS



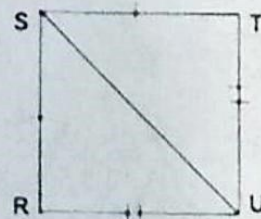
10. ASA



11. Not \cong



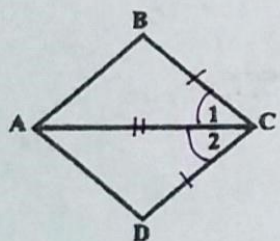
12. SSS



<p>13. <u>SSS</u></p>	<p>14. <u>SAS</u></p>	<p>15. <u>AAS</u></p>
<p>16. <u>AAS</u></p>	<p>17. <u>SAS</u></p>	<p>18. <u>ASA</u></p>

Write two-column proofs to prove each set of triangles congruent

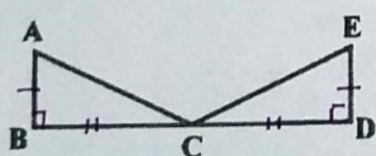
1.



Given: $\overline{BC} \cong \overline{CD}$
 \overline{AC} bisects $\angle BCD$
 Prove: $\triangle ABC \cong \triangle ADC$

- | | |
|--|------------------------|
| 1. $\overline{BC} \cong \overline{CD}$ | 1. Given |
| \overline{AC} bis. $\angle BCD$ | |
| 2. $\angle 1 \cong \angle 2$ | 2. Def of \angle bis |
| 3. $\overline{AC} \cong \overline{AC}$ | 3. Reflexive |
| 4. $\triangle ABC \cong \triangle ADC$ | 4. SAS |

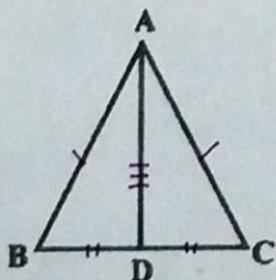
2.



Given: $\overline{AB} \cong \overline{ED}$
 C is midpoint \overline{BD}
 $\overline{AB} \perp \overline{BD}$, $\overline{ED} \perp \overline{BD}$
 Prove: $\triangle ABC \cong \triangle EDC$

- | | |
|---|---------------------------|
| 1. $\overline{AB} \cong \overline{ED}$ | 1. Given |
| C is mdpt of \overline{BD} | |
| $\overline{AB} \perp \overline{BD}$, $\overline{ED} \perp \overline{BD}$ | |
| 2. $\overline{BC} \cong \overline{CD}$ | 2. Def. of Mdpt |
| 3. $\angle B$ & $\angle D$ are
Rt \angle 's | 3. Def of \perp |
| 4. $\angle B \cong \angle D$ | 4. Rt. Ang \cong
Thm |
| 5. $\triangle ABC \cong \triangle EDC$ | 5. SAS |

3.



Given: $\overline{AB} \cong \overline{AC}$
 \overline{AD} bisects \overline{BC}
 Prove: $\triangle ABD \cong \triangle ACD$

- | | |
|--|--------------------|
| 1. $\overline{AB} \cong \overline{AC}$ | 1. Given |
| \overline{AD} bis. \overline{BC} | |
| 2. $\overline{BD} \cong \overline{DC}$ | 2. Def of Seg. Bis |
| 3. $\overline{AD} \cong \overline{AD}$ | 3. Reflexive |
| 4. $\triangle ABD \cong \triangle ACD$ | 4. SSS |