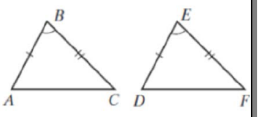
**AIM:** 5-10 Triangle Proof Test Review

Homework: Study for Test!

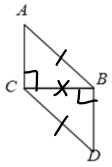
1. Which method can be used to prove $\Delta ABC \cong \Delta DEF$?

1) SSS
2) SAS
3) ASA
4) AAS




2. In the accompanying diagram, $\overline{AB} \cong \overline{CD}$, $\overline{AC} \perp \overline{BC}$ and $\overline{BD} \perp \overline{BC}$. Which of the following methods can be used to prove $\Delta ABC \cong \Delta DCB$?

1) SSA ≅ SSA
2) SAS ≅ SAS
3) HL ≅ HL
4) Cannot be determined

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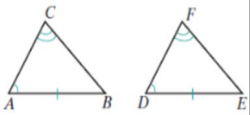
3. Which method can be used to prove $\Delta ABC \cong \Delta DEF$?

1) SSS
2) SAS
3) ASA
4) AAS




4. If $\Delta JKL \cong \Delta MNO$, which statement is always true?

1) $\angle LKJ \cong \angle NMO$
2) $\angle KJL \cong \angle MNO$
3) $\overline{JL} \cong \overline{MO}$
4) $\overline{JK} \cong \overline{ON}$

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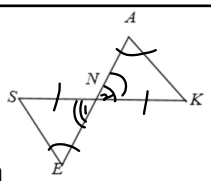
5. Given: $\angle E \cong \angle A$
$\overline{AE}$ bisects $\overline{SK}$

Prove: $\Delta SNE \cong \Delta KNA$




| Statement | Reason |
|---|---|
| 1) $\angle E \cong \angle A$ | 1) Given |
| 2) $\overline{AE}$ bisects $\overline{SK}$ | 2) Given |
| 3) $\overline{SN} \cong \overline{NK}$ | 3) Def. of a seg. bisector |
| 4) $\angle 1 \cong \angle 2$ | 4) *Vertical ∠'s are* ≅ |
| 5) $\Delta SNE \cong \Delta KNA$ | 5) *AAS* ≅ *AAS* |

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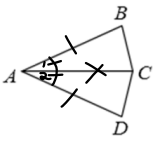
6. Given: $\overline{AB} \cong \overline{AD}$
$\overline{AC}$ bisects $\angle BAD$

Prove: $\Delta ABC \cong \Delta ADC$




| Statement | Reason |
|---|---|
| 1) $\overline{AB} \cong \overline{AD}$ | 1) Given |
| 2) $\overline{AC}$ bisects $\angle BAD$ | 2) Given |
| 3) $\angle 1 \cong \angle 2$ | 3) Def. of an ∠ bisector |
| 4) $\overline{AC} \cong \overline{AC}$ | 4) Reflexive Property |
| 5) $\Delta ABC \cong \Delta ADC$ | 5) *SAS* ≅ *SAS* |

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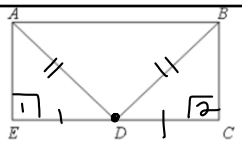
7. Given: $D$ is the midpoint of $\overline{EC}$.
$\overline{AE} \perp \overline{EC}$, $\overline{BC} \perp \overline{CE}$
$\overline{AD} \cong \overline{BD}$

Prove: $\Delta AED \cong \Delta BCD$




| Statement | Reason |
|---|---|
| 1) $D$ is the midpoint of $\overline{EC}$ | 1) Given |
| 2) $\overline{AE} \perp \overline{EC}$, $\overline{BC} \perp \overline{CE}$ | 2) Given |
| 3) $\overline{AD} \cong \overline{BD}$ | 3) Given |
| 4) $\angle 1$ & $\angle 2$ *are rt.* $\angle$*'s* | 4) ⊥ lines form rt. ∠'s |
| 5) $\angle 1 \cong \angle 2$ | 5) *All rt.* $\angle$*'s are* ≅ |
| 6) $\overline{ED} \cong \overline{CD}$ | 6) Def. of a midpoint |
| 7) $\Delta AED$ & $\Delta BCD$ are rt triangles | 7) Right triangles contain right ∠s |
| 8) $\Delta AED \cong \Delta BCD$ | 8) HL ≅ HL |

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