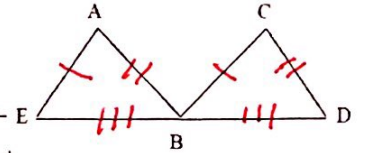


Name: Key Date: _____

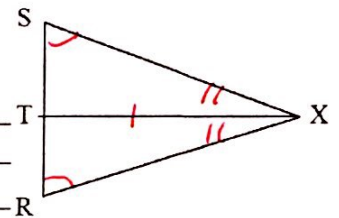
Triangle Proofs

- 1) Given: $\overline{AE} \cong \overline{CB}$, $\overline{AB} \cong \overline{CD}$, B is the midpoint of \overline{ED} .
 Prove: $\triangle AEB \cong \triangle CBD$



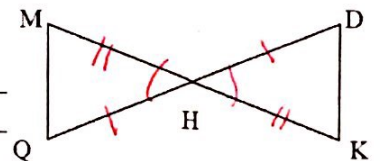
Statements	Reasons
1) $\overline{AE} \cong \overline{CB}$	Given
2) $\overline{AB} \cong \overline{CD}$	Given
3) B is the midpoint of \overline{ED}	Given
4) $\overline{EB} \cong \overline{BD}$	Def. of midpoint
5) $\triangle AEB \cong \triangle CBD$	SSS

- 2) Given: $\angle S \cong \angle R$ and \overline{XT} bisects $\angle SXR$.
 Prove: $\triangle SXT \cong \triangle RXT$



Statements	Reasons
1) $\angle S \cong \angle R$ and \overline{XT} bisects $\angle SXR$	Given
2) $\angle SXT \cong \angle RXT$	Def. of bisect
3) $\overline{XT} \cong \overline{XT}$	Reflexive
4) $\triangle SXT \cong \triangle RXT$	AAS

- 3) Given: H is the midpoint of \overline{MK} and \overline{QD} .
 Prove: $\triangle QMH \cong \triangle DKH$



Statements	Reasons
1) H is the midpoint of \overline{MK} and \overline{QD}	Given
2) $\overline{MH} \cong \overline{KH}$	Def. of midpoint
3) $\overline{QH} \cong \overline{DH}$	Def. of midpoint
4) $\angle MHD \cong \angle KHQ$	Vertical \angle s are congruent
5) $\triangle QMH \cong \triangle DKH$	SAS