

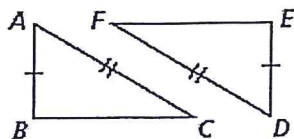
The HL Theorem

Name: _____

Write a two-column proof.

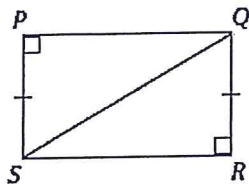
1. Given: $\overline{AB} \perp \overline{BC}$, $\overline{ED} \perp \overline{FE}$, $\overline{AB} \cong \overline{ED}$, $\overline{AC} \cong \overline{FD}$

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



2. Given: $\angle P$ and $\angle R$ are right angles, $\overline{PS} \cong \overline{QR}$

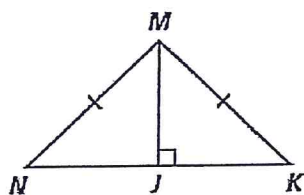
Prove: $\triangle PQS \cong \triangle RSQ$



Write a flow proof.

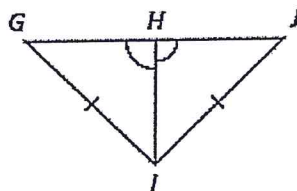
3. Given: $\overline{MJ} \perp \overline{NK}$, $\overline{MN} \cong \overline{MK}$

Prove: $\triangle MJN \cong \triangle MJK$



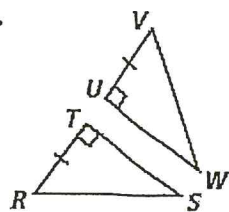
4. Given: $\overline{GI} \cong \overline{JI}$, $\angle GHI \cong \angle JHI$

Prove: $\triangle IHG \cong \triangle IJH$

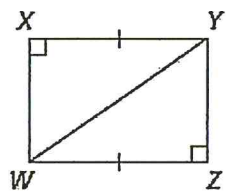


What additional information do you need to prove each pair of triangles congruent by the HL Theorem?

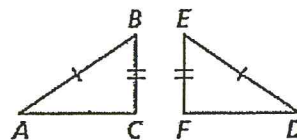
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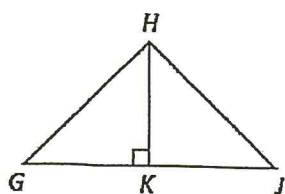
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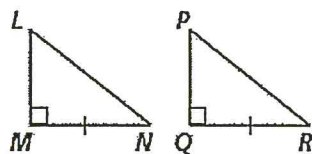
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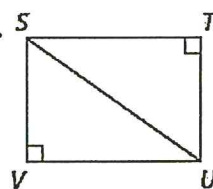
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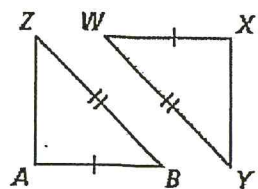
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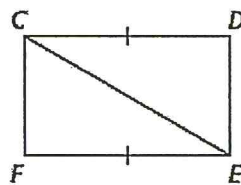
10.



11.



12.



13.

