

# Reteaching 4-6

## Congruence in Right Triangles

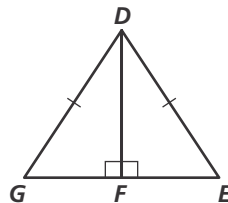
**OBJECTIVE:** Proving triangles congruent by the HL Theorem

**MATERIALS:** Ruler

### Example

Explain why  $\triangle GFD \cong \triangle EFD$  by the HL Theorem.

To prove two triangles congruent by the HL Theorem, prove that:

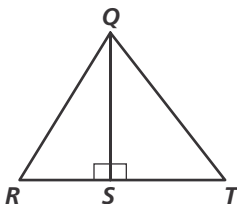


1. They are right triangles.
2. Their hypotenuses are congruent.
3. One pair of legs is  $\cong$ .
1.  $\angle GFD$  and  $\angle EFD$  are right angles. Therefore,  $\triangle GFD$  and  $\triangle EFD$  are right triangles.
2.  $\overline{GD} \cong \overline{ED}$  is given.
3.  $\overline{DF} \cong \overline{DF}$  by the Reflexive Property of  $\cong$ .

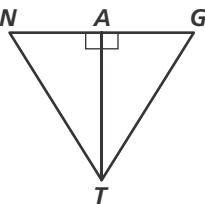
### Exercises

Measure the hypotenuses and the length of one pair of legs to decide whether the triangles are congruent by the HL Theorem. If the triangles are congruent, state the congruence.

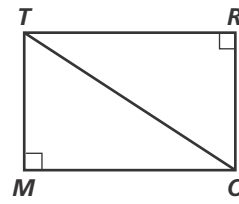
1.



2.

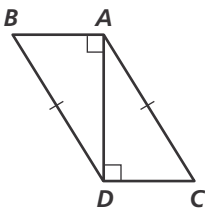


3.

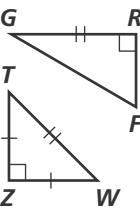


Tell whether the HL Theorem can be applied to prove the triangles congruent. If possible, write the triangle congruence.

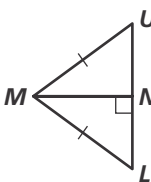
4.



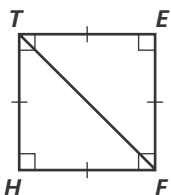
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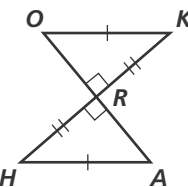
6.



7.



8.



9.

