Name Date

Notetaking with Vocabulary

For use after Lesson 5.5

5.5

In your own words, write the meaning of each vocabulary term.

legs – sides adjacent to the right angle in a right triangle

hypotenuse – side opposite the right angle in a right triangle

Theorems

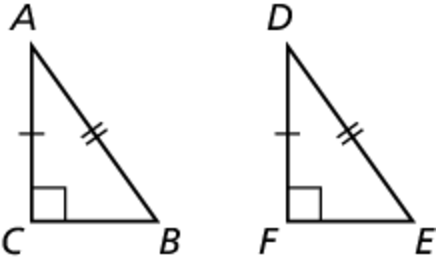
Theorem 5.8 Side-Side-Side (SSS) Congruence Theorem

If three sides of one triangle are congruent to three sides of a   
second triangle, then the two triangles are congruent.

If  then  


Notes:

Theorem 5.9 Hypotenuse-Leg (HL) Congruence Theorem

If the hypotenuse and a leg of a right triangle are congruent to   
the hypotenuse and a leg of a second right triangle, then the   
two triangles are congruent.

If  and  then   


Notes:

Name Date

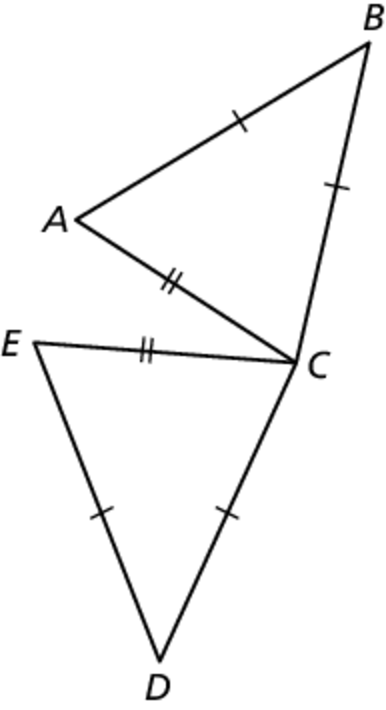
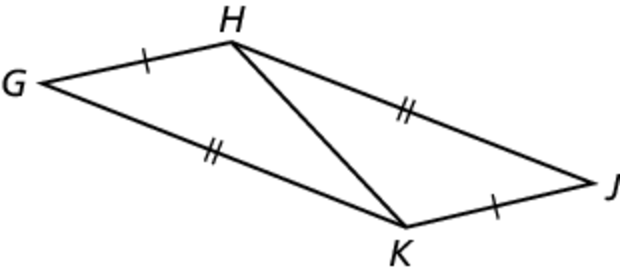
5.5

Notetaking with Vocabulary **(continued)**

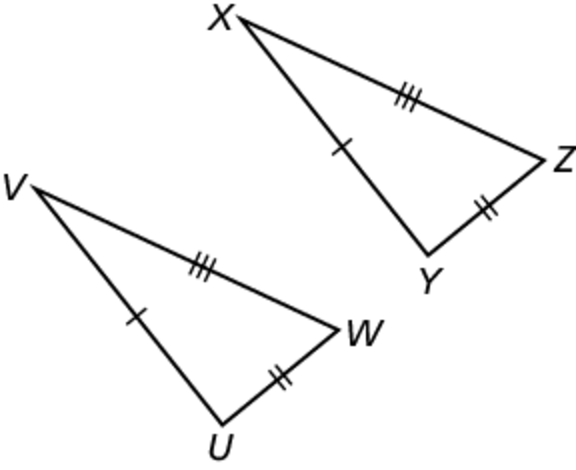
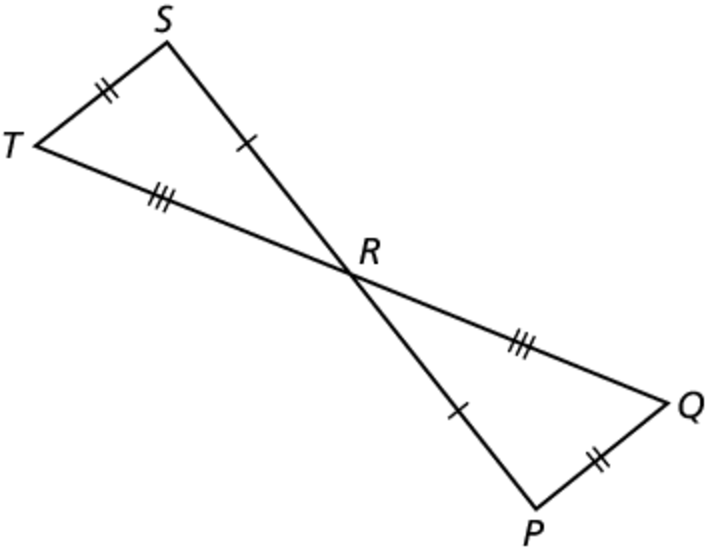
**Extra Practice**

In Exercises 1–4, decide whether the congruence statement is true. Explain your reasoning.

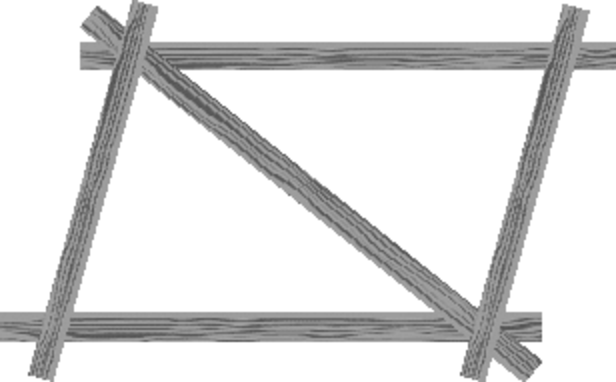
1.  2. 



3.  4. 



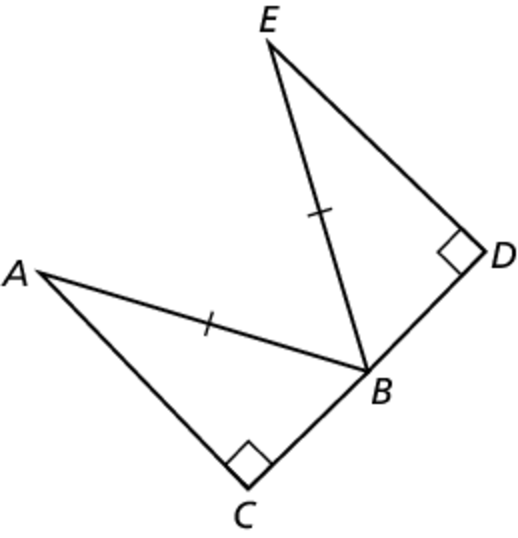
5. Determine whether the figure is stable. Explain your reasoning.



Name Date

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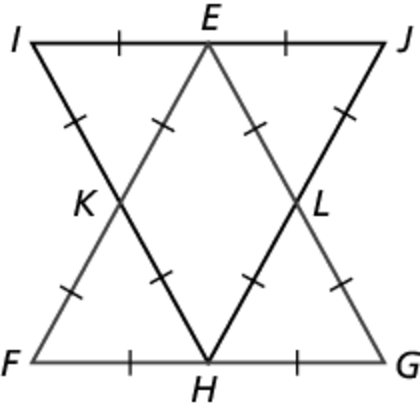
Notetaking with Vocabulary **(continued)**

**** 6. Redraw the triangles so they are side by side with corresponding   
parts in the same position. Then write a proof.

Given *B* is the midpoint of   
  and  are right angles.

Prove 

|  |  |
| --- | --- |
| STATEMENTS | REASONS |
| 1. | 1. Given |
| 2.  3. | 1. Definition of a midpoint 2. Definition of a right triangle |
| 4. | 1. HL congruence theorem (Theorem 5.9) |
|  |  |

**** 7. Write a proof.

Given   
 

Prove 

|  |  |
| --- | --- |
| STATEMENTS | REASONS |
|  | 1. Given 2. Segment addition postulate (Post. 1.2) 3. Substitution property of equality |
|  | 1. Transitive property of congruence (2.1) |
|  |  |
|  | 1. SSS congruence theorem (Theorem 5.8) |