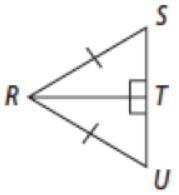
Name _____ Class _____ Date_____

4-6 Practice

Form G

Congruence in Right Triangles

1. Developing Proof Complete the paragraph proof.



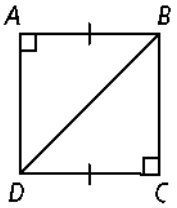
Given: $\overline{RT} \perp \overline{SU}, \overline{RU} \cong \overline{RS}$

Prove: $\Delta RUT \cong \Delta RST$

Proof: It is given that $\overline{RT} \perp \overline{SU}$. So, _____ and _____are _____ angles because perpendicular lines form _____ angles. _____ $\cong \overline{RT}$ by the Reflexive Property of Congruence. It is given that _____ $\cong \overline{RS}$. So, $\Delta RUT \cong \Delta RST$ by _____.

2. Look at Exercise 1. If $m\angle RST = 46$, what is $m\angle RUT$?

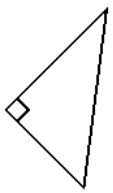
3. Write a flow proof. Use the information from the diagram to prove that $\Delta ABD \cong \Delta CDB$.



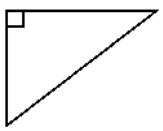
4. Look at Exercise 3. Can you prove that $\Delta ABD \cong \Delta CDB$ without using the Hypotenuse-Leg Theorem? Explain.

Construct a triangle congruent to each triangle by the Hypotenuse-Leg Theorem.

5.



6.



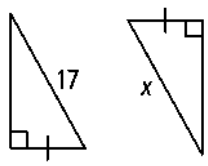
Name _____ Class _____ Date _____

4-6 Practice (continued) *Form G*

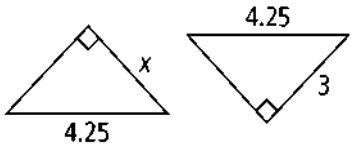
Congruence in Right Triangles

Algebra For what values of x or x and y are the triangles congruent by HL?

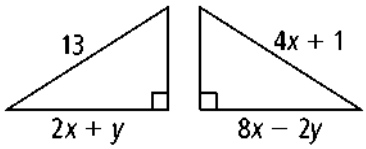
7.



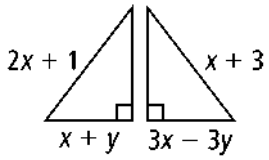
8.



9.



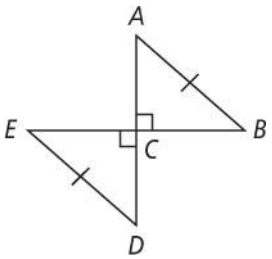
10.



11. Write a paragraph proof.

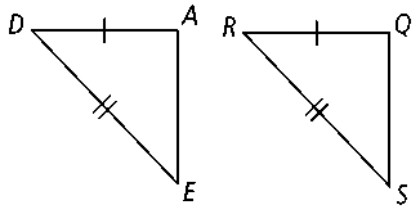
Given: $\overline{AD}$ bisects $\overline{EB}, \overline{AB} \cong \overline{DE}$; $\angle ECD$, $\angle ACB$ are right angles.

Prove: $\Delta ACB \cong \Delta DCE$

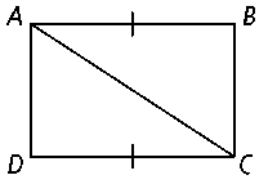


What additional information would prove each pair of triangles congruent by the Hypotenuse-Leg Theorem?

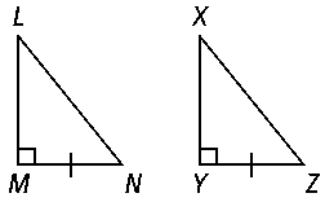
12.



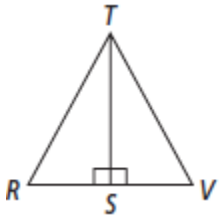
13.



14.



15.



16. Reasoning Are the triangles congruent? Explain.