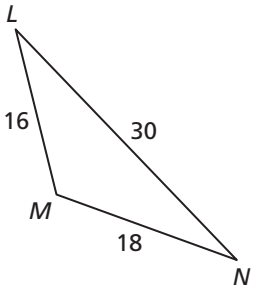
Name_____ Date _____

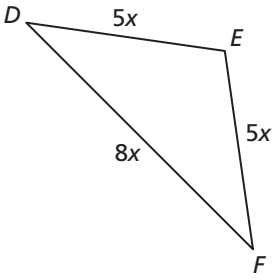
6.5 Practice A

In Exercises 1 and 2, list the angles of the given triangle from smallest to largest.

1.

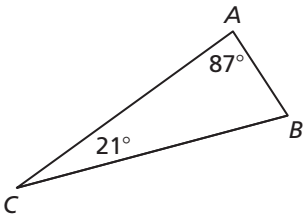


2.

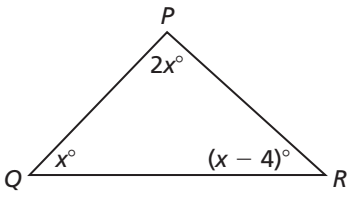


In Exercises 3 and 4, list the sides of the given triangle from shortest to longest.

3.



4.

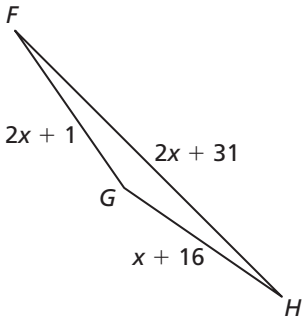


In Exercises 5 and 6, is it possible to construct a triangle with the given side lengths? Explain.

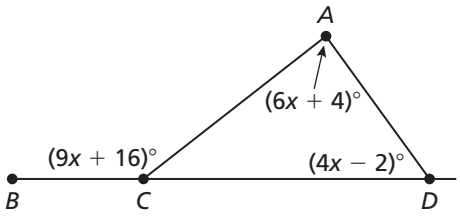
5. 15, 37, 53

6. 9, 16, 8

7. Describe the possible values of x in the figure shown.



8. List the angles of the given triangle from smallest to largest. Explain your reasoning.



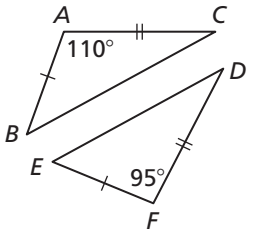
9. The shortest distance between two points is a straight line. Explain this statement in terms of the Triangle Inequality Theorem (Theorem 6.11).

Name_____ Date _____

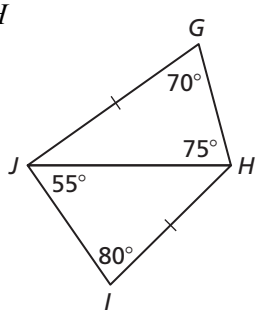
6.6 Practice B

In Exercises 1–4, copy and complete the statement with <, >, or =. Explain your reasoning.

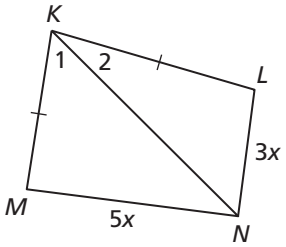
1. BC _____ DE



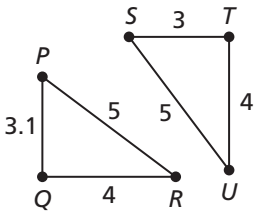
2. JI _____ GH



3. $m\angle 1$ _____ $m\angle 2$

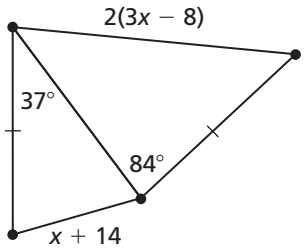


4. $m\angle U$ _____ $m\angle R$

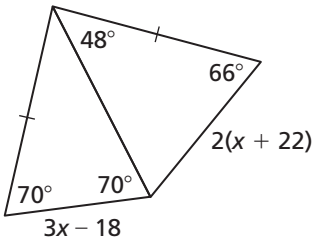


In Exercises 5 and 6, write and solve an inequality for the possible values of x.

5.



6.



7. Two sailboats started at the same location. Sailboat A traveled 5 miles west, then turned $29°$ toward the north and continued for 8 miles. Sailboat B first went south for 8 miles, then turned $51°$ toward the east and continued for 5 miles. Which sailboat was farther from the starting point? Explain your reasoning.

8. How are the Hinge Theorem (Theorem 6.12) and the SAS Congruence Theorem (Theorem 5.5) similar? How are they different? Explain your reasoning.