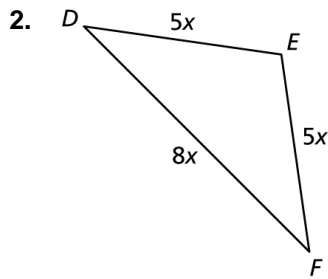
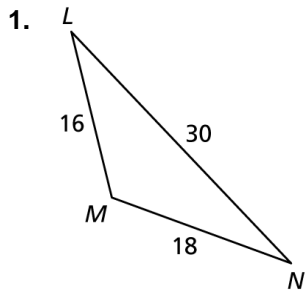


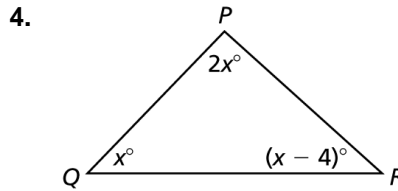
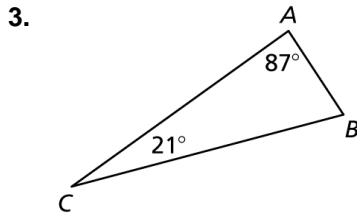
# Lesson 6.5

Name \_\_\_\_\_ Period \_\_\_\_\_

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



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

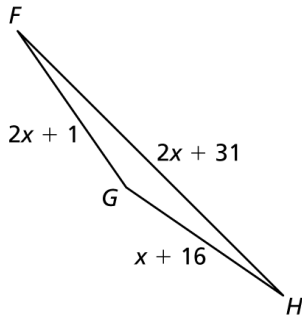


In Exercises 5 and 6, is it possible to construct a triangle with the given side lengths? Explain.

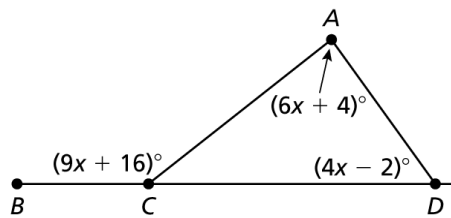
5. 15, 37, 53

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.



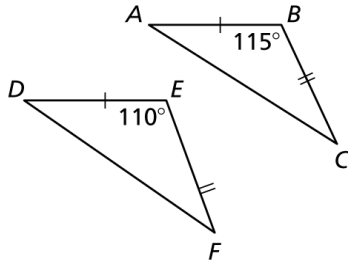
9. A triangle has two sides with lengths 5 inches and 13 inches. Describe the possible lengths of the third side of the triangle.

Lesson 6.6

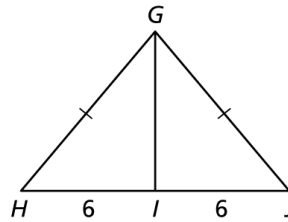
Name \_\_\_\_\_ Period \_\_\_\_\_

In Exercises 1–8, complete the statement with  $<$ ,  $>$ , or  $=$ . Explain your reasoning.

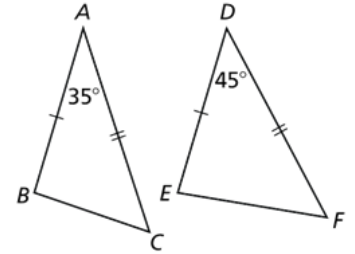
1.  $AC$  \_\_\_\_\_  $DF$



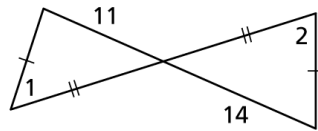
2.  $m\angle HGI$  \_\_\_\_\_  $m\angle IGJ$



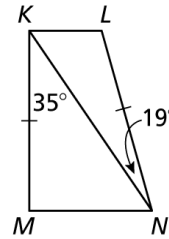
3.  $BC$  \_\_\_\_\_  $EF$



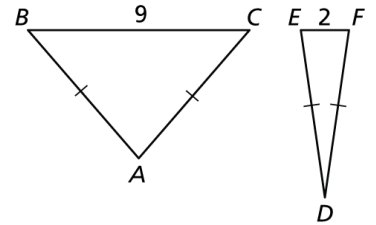
4.  $m\angle 1$  \_\_\_\_\_  $m\angle 2$



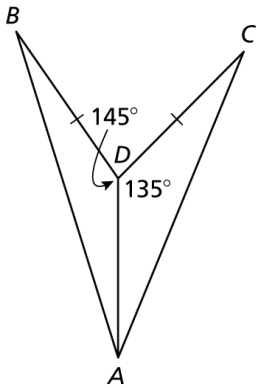
5.  $KL$  \_\_\_\_\_  $MN$



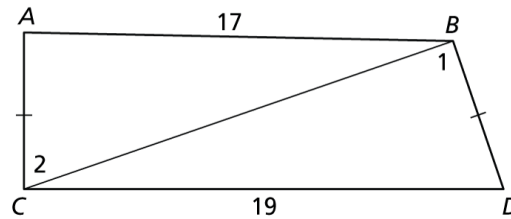
6.  $m\angle A$  \_\_\_\_\_  $m\angle D$



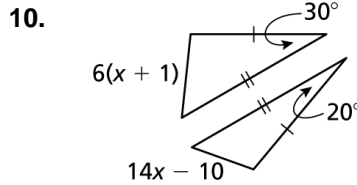
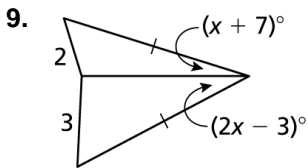
7.  $AB$  \_\_\_\_\_  $AC$



8.  $m\angle 1$  \_\_\_\_\_  $m\angle 2$



In Exercises 9 and 10, write and solve an inequality for the possible values of  $x$ .



11. The figure shows two slides. The slide is the same length in each case, but one is steeper than the other. Can you apply the Hinge Theorem (Theorem 6.12) or the Converse of the Hinge Theorem (Theorem 6.13) in this problem? Explain your reasoning.

