6.5 **Practice** *Form G*

Inequalities in One Triangle

Explain why $m\angle 1 > m\angle 2$.

1.

2.

For Exercises 3–6, list the angles of each triangle in order from smallest to largest.

3.

4.

5.

6.
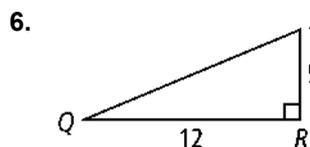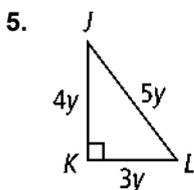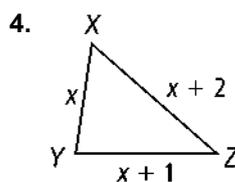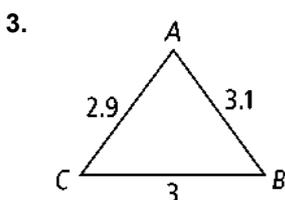
For Exercises 7–10, list the sides of each triangle in order from shortest to longest.

7.

8.
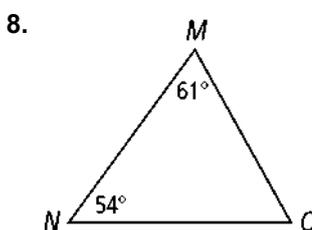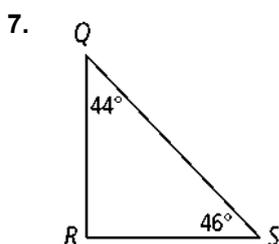
10. $\triangle ABC$, with $m\angle A = 122$, $m\angle B = 22$, and $m\angle C = 36$

For Exercises 11 and 12, list the angles of each triangle in order from smallest to largest.

**11.** $\triangle ABC$, where $AB = 17$, $AC = 13$, and $BC = 29$

5-6

Practice (Continued)

Inequalities in One Triangle

Form G

Form G

Determine which side is shortest in the diagram.

13.
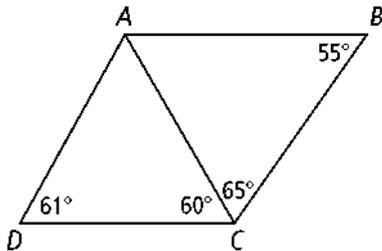
14.
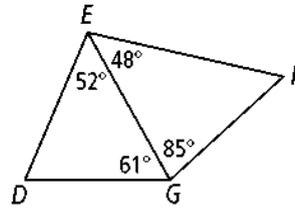
Can a triangle have sides with the given lengths? Explain.

15. 8 cm, 7 cm, 9 cm

16. 7 ft, 13 ft, 6 ft

17. 20 in., 18 in., 16 in.

Algebra **The lengths of two sides of a triangle are given. Describe the possible lengths for the third side.**

20. 12, 12

21. 25, 10

22. 6, 8

24. Algebra List the sides in order from shortest to longest in $\triangle ABC$, with $m\angle A = 80$, $m\angle B = 3x + 5$, and $m\angle C = 5x - 1$.