Practice 5-5

Inequalities in Triangles

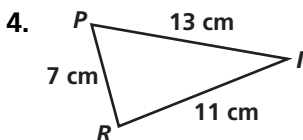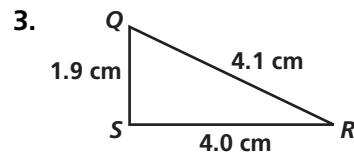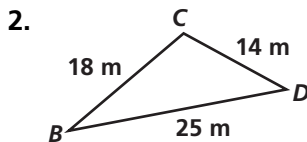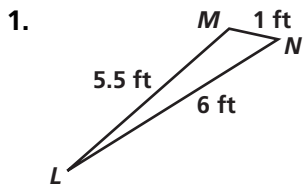**Determine the two largest angles in each triangle.**

1.

M 1 ft
N
5.5 ft
6 ft
L

2.

C
14 m
18 m
D
B   25 m

3.

Q
4.1 cm
1.9 cm
S   R
4.0 cm

4.

P   13 cm
7 cm   I
11 cm
R

5.

15 yd   A
T
20 yd
25 yd
B

6.

S   39 cm
24 cm
K
A   55 cm
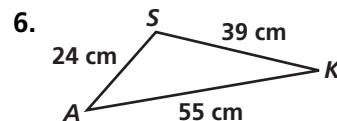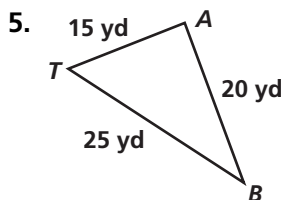
Can a triangle have sides with the given lengths? Explain.

7. 4 m, 7 m, and 8 m

8. 6 m, 10 m, and 17 m

9. 4 in., 4 in., and 4 in.

10. 1 yd, 9 yd, and 9 yd

11. 11 m, 12 m, and 13 m

12. 18 ft, 20 ft, and 40 ft
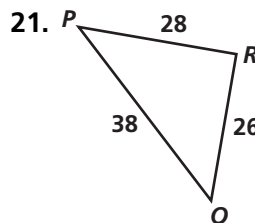
13. 1.2 cm, 2.6 cm, and 4.9 cm

14. $8\frac{1}{2}$ yd, $9\frac{1}{4}$ yd, and 18 yd

15. 2.5 m, 3.5 m, and 6 m

List the sides of each triangle in order from shortest to longest.

16.

B   C
47°
41°
A

17.

L
56°
O
B

18.

S
75°
T
107°
R
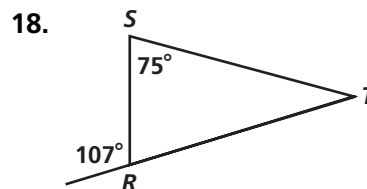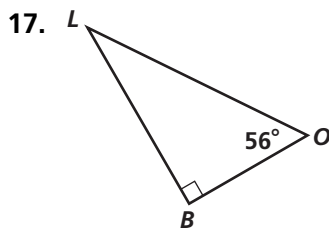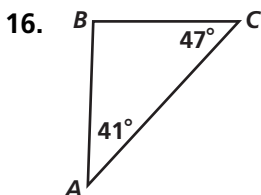
List the angles of each triangle in order from largest to smallest.

19.

1.7
S   D
3.4   2.6
A

20.

S
13
25
N
J   21

21.

P   28
R
38   26
O
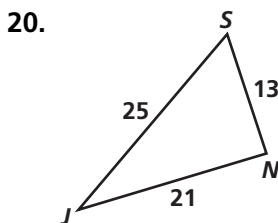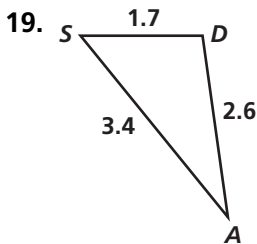
The lengths of two sides of a triangle are given. Describe the lengths possible for the third side.

22. 4 in., 7 in.

23. 9 cm, 17 cm

24. 5 ft, 5 ft

25. 11 m, 20 m

26. 6 km, 8 km

27. 24 in., 37 in.