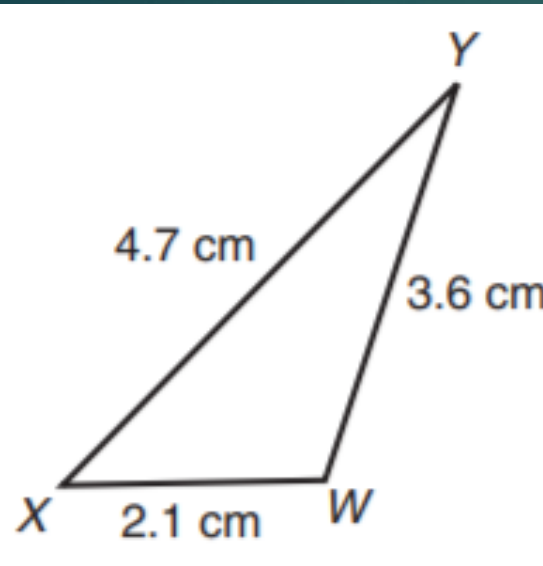Without measuring the angles, list the angles
of each triangle in order from least to greatest measure.
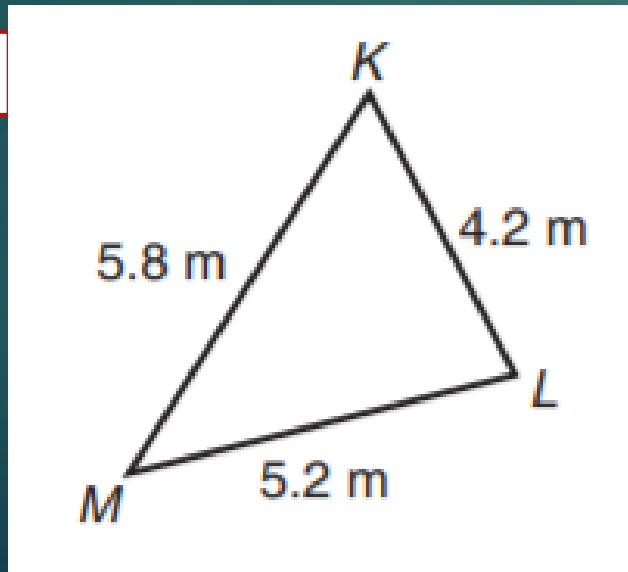
1)
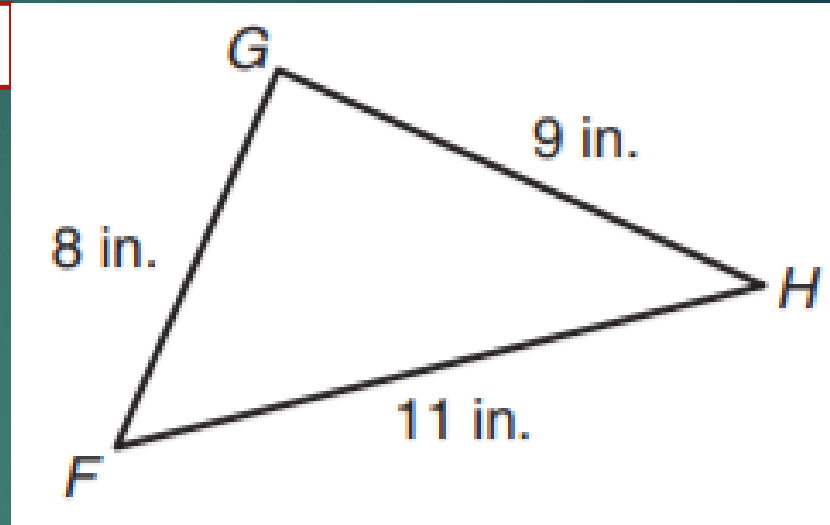
Y
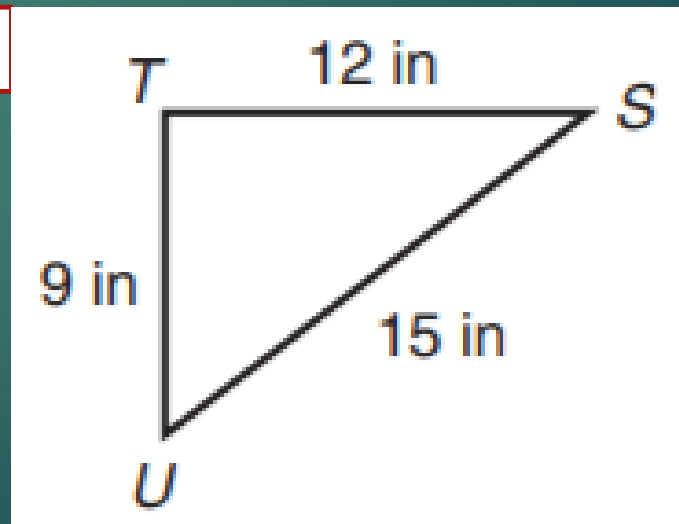
4.7 cm

3.6 cm

X   2.1 cm   W

2)

G

9 in.

8 in.

H

11 in.

F

3)

K

4.2 m

5.8 m

L

M   5.2 m

4)

T   12 in

S

9 in

15 in

U

Determine whether it is possible to form a triangle using each set of segments with the given measurements. Explain your reasoning.

Example:

3 inches, 2.9 inches, 5 inches

Yes. A triangle can be formed because the sum of the two shortest sides is greater than the longest side.
Sum of the Two Shortest Sides: 3 + 2.9 = 5.9
Longest Side: 5

5) 7.4 centimeters, 8.1 centimeters, 9.8 centimeters

6) 8 feet, 9 feet, 11 feet

7) 4 meters, 5.1 meters, 12.5 meters

Determine whether it is possible to form a triangle using each set of segments with the given measurements. Explain your reasoning.

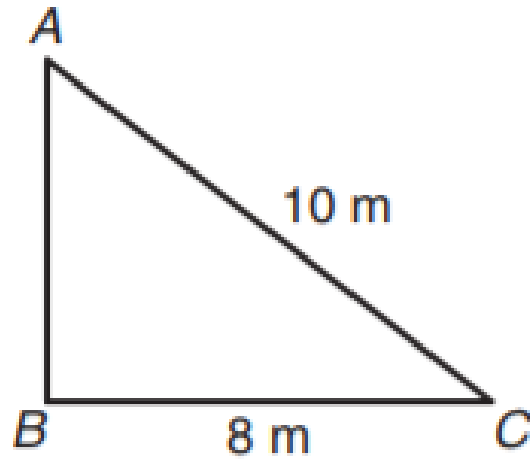8) 20.2 inches, 11 inches, 8.2 inches

9) 8 ft, 8 ft, 8 ft

10) 30 cm, 12 cm, 17 cm

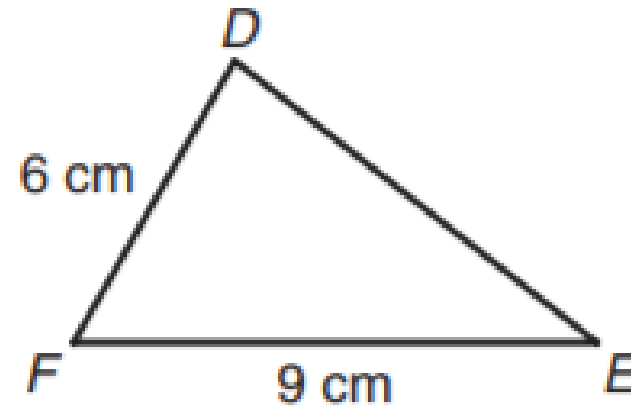11) 112 millimeters, 300 millimeters, 190 millimeters

12) 10 yards, 5 yards, 21 yards

Write an inequality that expresses the possible lengths of the unknown side of each triangle.

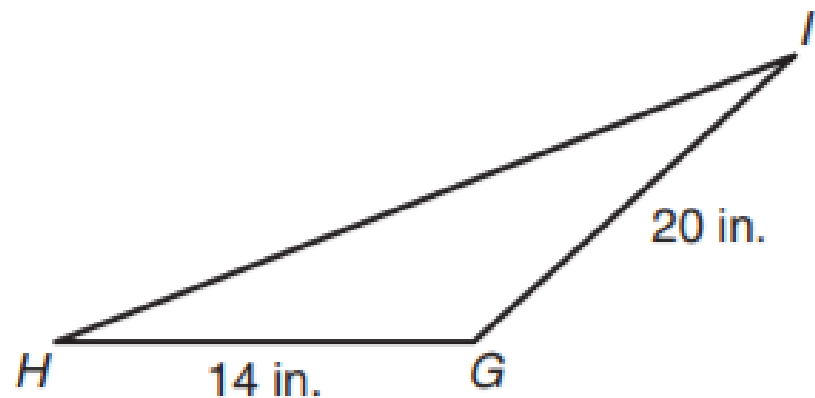**13)** What could be the length of $\overline{AB}$?

A

10 m

B   8 m   C

14) What could be the length of $\overline{DE}$?

D

6 cm

F   9 cm   E

Write an inequality that expresses the possible lengths of the unknown side of each triangle.

15) What could be the length of $\overline{HI}$?

20 in.

H   14 in.   G

16) What could be the length of $\overline{QR}$?

P

9 mm   13 mm

R   Q