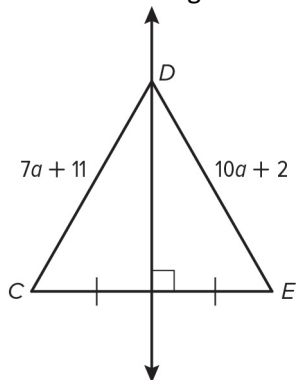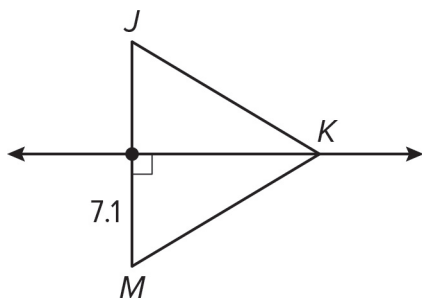**Module 6 – Test Form A**

Relationships in Triangles
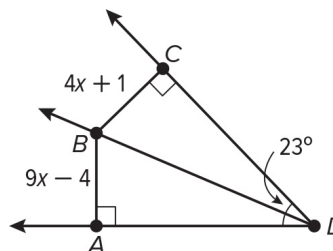
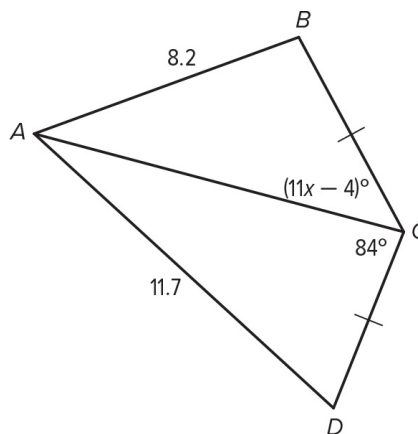**1.** What is the length of $\overline{CD}$?

2. If $\overline{JK} \cong \overline{MK}$, the length of $\overline{JM}$ is _____.

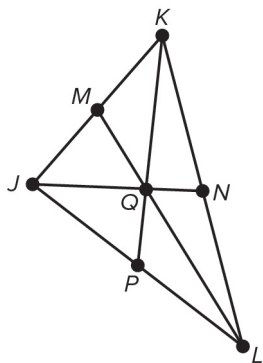**3.** The length of $\overline{CB}$ is _____ and $m\angle BDA$ is _____

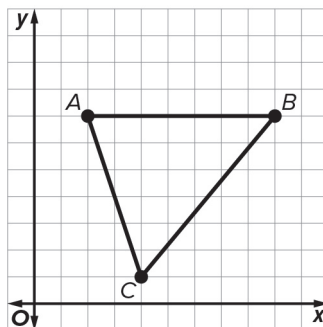**4.** What is the range of possible values for x?

A. $1 < x < 7.27$

B. $7.27 < x < 16.73$

C. $0.36 < x < 8$

D. $8 < x < 16.73$

5. In △*JKL*, *Q* is the centroid and *ML* = 48.

MQ = _____ *QL* = _____

6. **BIRDS** Sunil is designing a triangular-shaped bird bath. A pole will attach under the bird bath to hold it up.


Where should the pole be placed in order to balance the bird bath?

A. (4, 5.33)   C. (4.76, 5.01)

B. (5.5, 4.83)   D. (5, 5)

7. Complete the table by placing an X in the appropriate column to tell whether or not the given side lengths form a triangle.

	Makes a Triangle	Does Not Make a Triangle
3 in., 5 in., 8 in.		
5 cm, 7 cm, 13 cm		
2.4 mm, 5.7 mm, 7.9 mm		
3.1 cm, 3.1 cm, 6.1 cm		
18.23 ft, 18.23 ft, 18.23 ft		

8. What is the possible range for the length of side $\overline{LM}$?

M

9
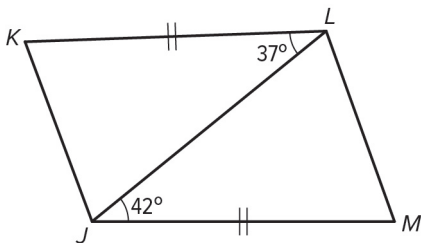
L _____ N
17

A. $8 < LM < 26$ C. $LM > 8$

B. $8 > LM > 26$ D. $LM < 26$
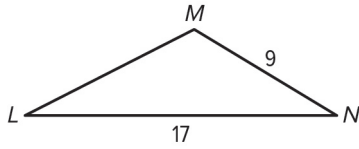
9. **BEES** The location of three beehives in an apple orchard forms a triangle. Hive *A* is 600 feet from Hive *B*. Hive *B* is 450 feet from Hive *C*.
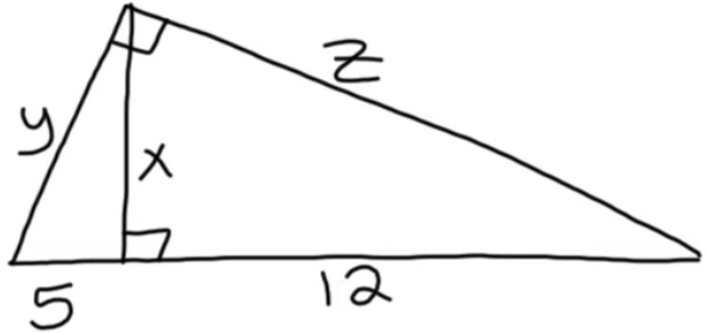
The possible range for the distance between Hive *A* and Hive *C* is

_____ < *x* < _____.

10. How do the lengths of sides $\overline{JK}$ and $\overline{LM}$ compare?

K   L

37°

42°
J   M

11. Solve for x, y, and z

z

y

x

5   12

12. Graph the three medians and find the centroid, also use the centroid formula to prove your answer.

T
7
E
6
5
4
3
2
1
−6 D−5   −4   −3   −2   −1   1   2 F 3