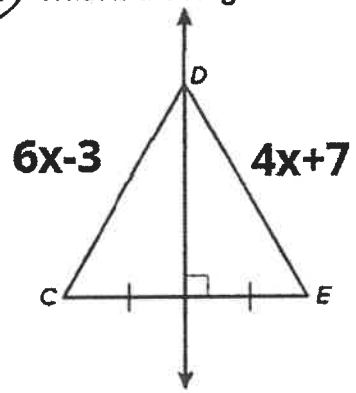
Name _____ Period _____ Date _____ Score _____

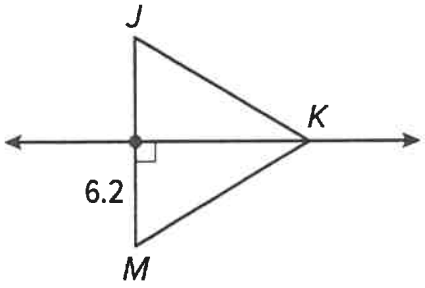
Module 6 – Test Form B

Relationships in Triangles

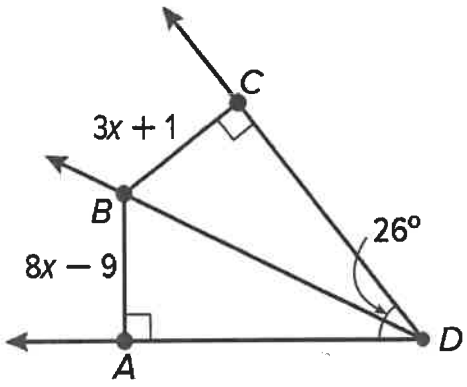
1. What is the length of $\overline{DE}$? _____



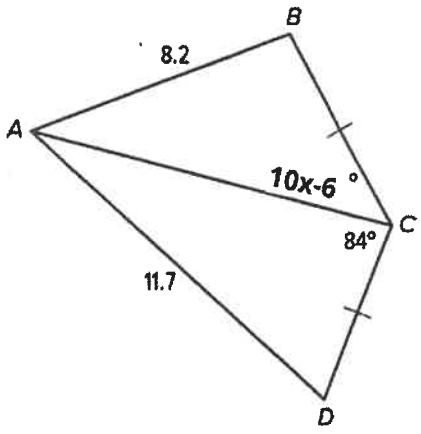
2. If $\overline{JK} \cong \overline{MK}$, the length of $\overline{JM}$ is ____



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



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

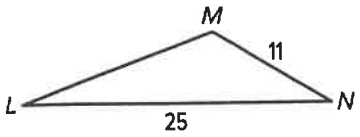


Answer: ☐ < X < ☐

5. 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., 7 in.		
5 cm, 7 cm, 10 cm		
3.1 cm, 3.1 cm, 3.1 cm		
20 ft, 20 ft, 40 ft		

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



A. $LM > 14$

C. $14 < LM < 36$

B. $LM < 36$

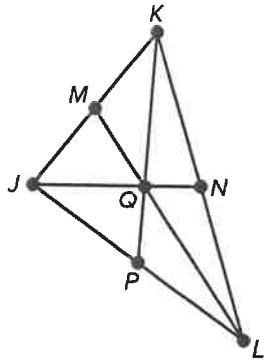
D. $14 > LM > 36$

7. **BEES** The location of three beehives in an apple orchard forms a triangle. Hive *A* is 700 feet from Hive *B*. Hive *B* is 300 feet from Hive *C*.

The possible range for the distance between Hive *A* and Hive *C* is

_____ < *x* < _____.

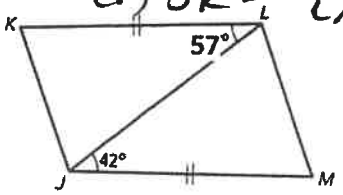
8. In $\triangle JKL$, *Q* is the centroid and $ML = 45$.



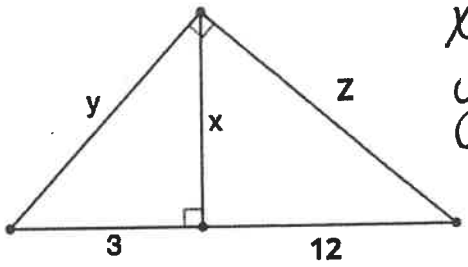
$MQ =$ _____ $QL =$ _____

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

A.) $\overline{JK} < \overline{LM}$
B.) $\overline{JK} > \overline{LM}$
C.) $\overline{JK} \cong \overline{LM}$



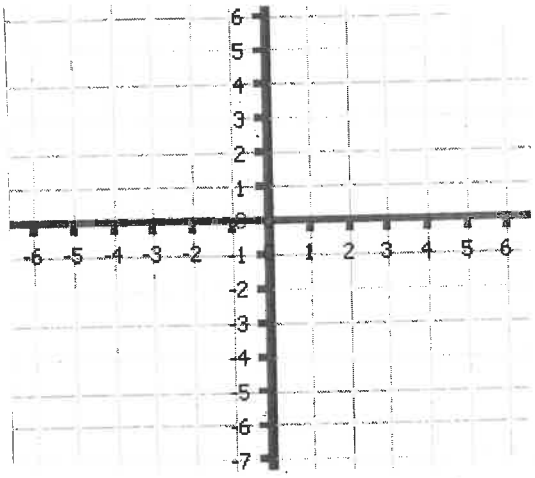
10. **Solve for the value of x, y, and z. Make sure to simplify the radicals.**



x = _____
y = _____
z = _____

11. Graph triangle ABC. Graph the three medians and find the centroid. Use the centroid formula to prove your answer.

A (-2,0) B (5,0) C (0, -6)



Location of the centroid is (_, _)