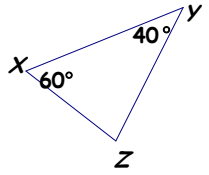
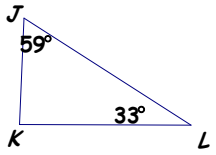
Triangle Inequality

~ 1 ~

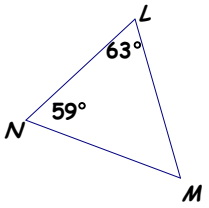
1. Name the shortest side of ΔXYZ .



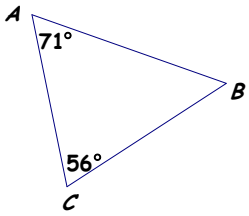
2. Name the longest side of ΔJKL .



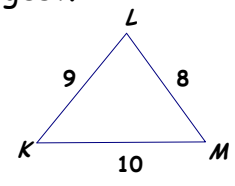
3. Name the largest angle of ΔLMN .



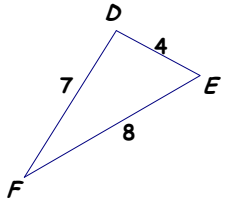
4. Name the smallest angle of ΔABC .



5. List the angles in order from the smallest to largest.

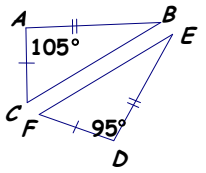


6. List the angles in order from largest to smallest.



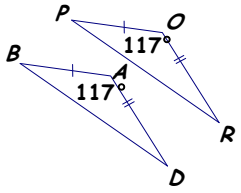
Complete with <, >, or =. (7-10)

7.



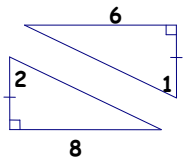
$\angle A$ _____ $\angle D$

8.



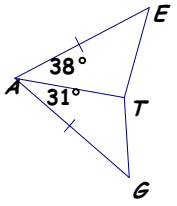
$\overline{PR}$ _____ $\overline{BD}$

9.



$\angle 1$ _____ $\angle 2$

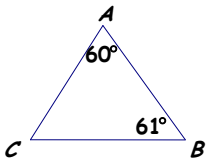
10.



$\overline{ET}$ _____ $\overline{TG}$

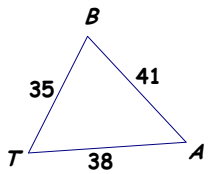
Triangle Inequality
~ 2 ~

11. According to ΔABC, which is the longest side?



A. $\overline{BC}$
B. $\overline{AB}$
C. $\overline{AC}$
D. $\overline{AB}$ and $\overline{AC}$ are congruent

12. According to ΔBAT, which is the smallest angle?



A. $\angle T$
B. $\angle A$
C. $\angle B$
D. $\angle B$ and $\angle A$ are congruent

13. If one side of a triangle is 12 cm and the other is 16 cm. Which inequality describes the possible lengths of the third side?

A. $4 < x < 12$
B. $4 < x < 28$
C. $12 < x < 16$
D. $16 < x < 28$

14. **Given**: $AB + AC > BC$
Prove: $x < 7$