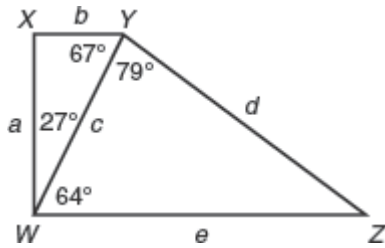


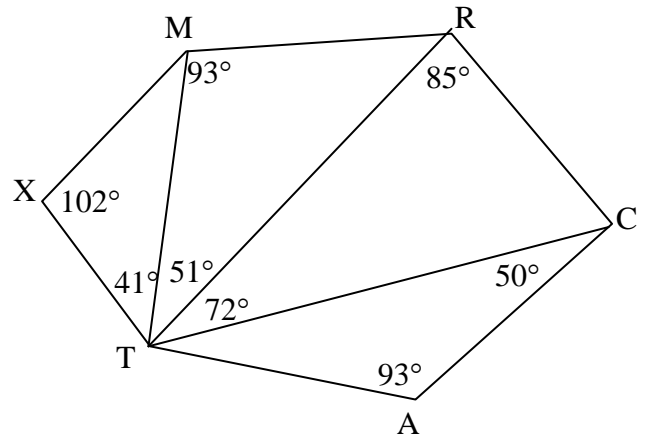
5.2-5.3: Triangle Inequalities
Pre-AP Geometry

Name _____
Date _____ Period ____

1. What is the shortest side of the figure?



2. What is the longest side of the figure?



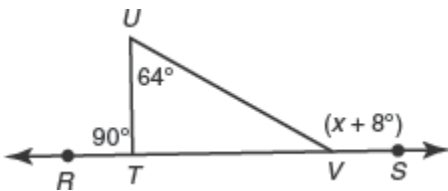
3. Sticks are cut into lengths that are represented by integers of lengths 1 through 9. Two of the sticks, one of length 3 and another of length 6, are set aside to form a triangle. Of the remaining 7 sticks, what is the probability that another stick is selected that would form a triangle?

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

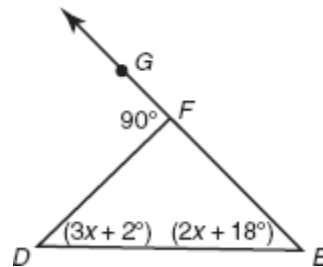
4. 13.8 kilometers, 6.3 kilometers, 7.5 kilometers

5. 112 millimeters, 300 millimeters, 190 millimeters

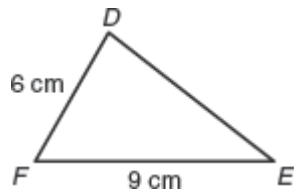
6. Solve for x in the figure:



7. Solve for x in the figure:



8. What is the range of possible values for the 3rd side of the triangle?



9. You are planning a vacation to Montana. You want to visit the destinations shown in the map below.

- a) A brochure states that the distance between Granite Peak and Fort Peck Lake is 1080 kilometers. Explain how you know that this distance is a misprint.



- b) Could the distance from Granite Peak to Fort Peck Lake be 40 kilometers?

- c) What is the range of possible distances from Granite Peak to Fort Peck Lake?

10. The coordinates of the vertices of triangle GHI are $G(-3,-4)$, $H(-1,-9)$, and $I(3,-3)$. List the angles from least measure to greatest measure. Justify your answers with the distance formula.

