

# Triangle Inequality Theorem Homework

Name: \_\_\_\_\_

State if the three numbers can be the measures of the sides of a triangle.

1) 7, 5, 4

2) 3, 6, 2

3) 5, 2, 4

4) 8, 2, 8

5) 9, 6, 5

6) 5, 8, 4

7) 4, 7, 8

8) 11, 12, 9

Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

13) 9, 5

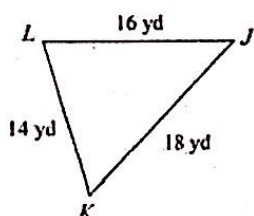
14) 5, 8

15) 6, 10

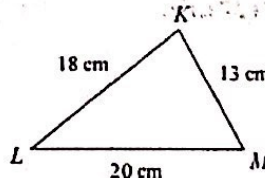
16) 6, 9

Order the angles in each triangle from smallest to largest.

1)

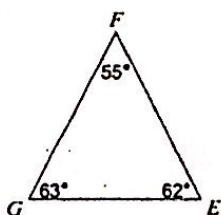


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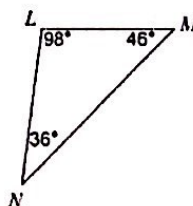


Order the sides of each triangle from shortest to longest.

9)

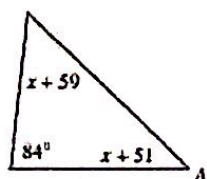


10)

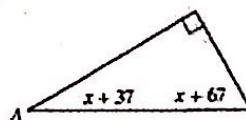


Find the measure of angle A.

21)

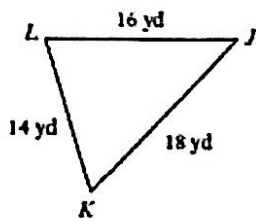


22)



Order the angles in each triangle from smallest to largest.

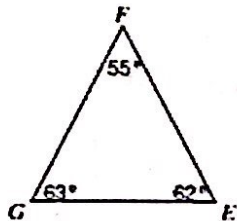
1)



3) In  $\triangle RQP$   
 $QP = 15 \text{ ft}$   
 $RP = 25 \text{ ft}$   
 $RQ = 13 \text{ ft}$

Order the sides of each triangle from shortest to longest.

9)



11) In  $\triangle VWX$   
 $m\angle V = 50^\circ$   
 $m\angle W = 48^\circ$   
 $m\angle X = 82^\circ$

4) Solve for  $x$  in each diagram.

