

Inequalities for One Triangle

For use after Section 6-4

Is it possible for a triangle to have sides with the lengths indicated?

Write *Yes* or *No*.

1. 12, 11, 4 _____

2. 14, 14, 0.02 _____

3. 5, 5, 15 _____

4. 8, 8, 8 _____

The lengths of two sides of a triangle are given. Write the numbers that best complete the statement: The length of the third side must be greater than _____, but less than _____.

5. 7, 9 _____

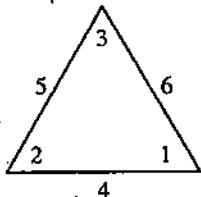
6. 15, 15 _____

7. $4x$, $6x$ _____

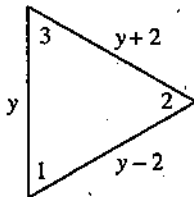
8. k , $k + 2$ _____

In Exercises 9-11 the diagrams are not drawn to scale. If each diagram were drawn to scale, which numbered angle would be the largest?

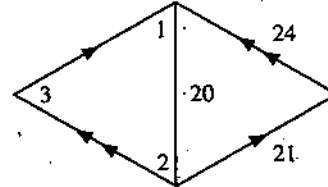
9.



10.

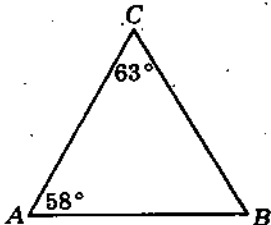


11.

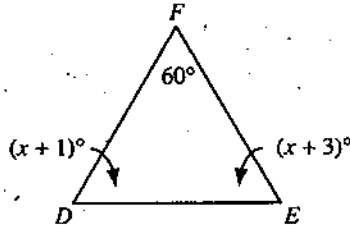


In Exercises 12-14 the diagrams are not drawn to scale. If each diagram were drawn to scale, which segment would be the longest?

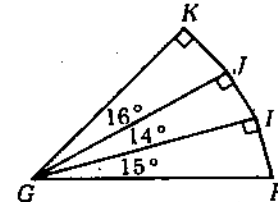
12.



13.

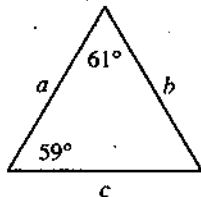


14.



Use lengths a , b , and c to complete.

15.



_____ > _____ > _____