

**Skills Practice*****Triangle Inequality Theorem***

*Determine if the three numbers can be measures of the sides of a triangle. Write yes or no. Explain.*

1. 6, 7, 8

2. 1, 1, 2

3. 2, 4, 6

4. 5, 8, 10

5. 10, 20, 30

6. 3, 4, 5

7. 3, 5, 7

8. 6, 12, 24

9. 1, 7, 10

10. 10, 15, 26

11. 8, 12, 19

12. 4, 7, 10

*Find the range of possible measures for the third side of a triangle with the measures given for two sides.*

13. 7, 13

14. 20, 25

15. 1, 5

16. 32, 38

17. 50, 70

18. 8, 20

19. 55, 10

20. 2, 10

21. 60, 70

22. 45, 70

23. 9, 19

24. 100, 120

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

Date \_\_\_\_\_

**Topic: Triangle Inequality Theorem - Worksheet 1**

- 1. Lengths 13, 11, 10 could represent the measures of the sides of a triangle?**
  
- 2. In triangle KLM,  $\angle K = 40^\circ$  and  $\angle K > \angle L$ . Which is the smallest side of the triangle?**
  
- 3. Two sides of an isosceles triangle measures 24 and 11. What is the possible value of the third side?**
  
- 4. In triangle FGH, an exterior angle at F measures  $70^\circ$ , and  $\angle G = 50^\circ$ . Which is the longest side of the triangle?**
  
- 5. Lengths 16, 11, 18 could represent the measures of the sides of a triangle?**
  
- 6. In triangle KLM,  $\angle K = 55^\circ$  and  $\angle L = 40^\circ$ . Which is the longest side of the triangle?**
  
- 7. In triangle NOP,  $\angle N = 95^\circ$  and  $\angle N > \angle O > \angle P$ . Which is the longest side of the triangle?**
  
- 8. In  $\triangle PQR$ ,  $PQ = 8$ ,  $QR = 7$ ,  $RP = 15$ . Which is the largest angle?**
  
- 9. In triangle RPS, an exterior angle at R measures  $64^\circ$ , and  $\angle P = 26^\circ$ . Which is the longest side of the triangle?**
  
- 10. Two sides of an isosceles triangle measures 16 and 9. What is the possible value of the third side?**

