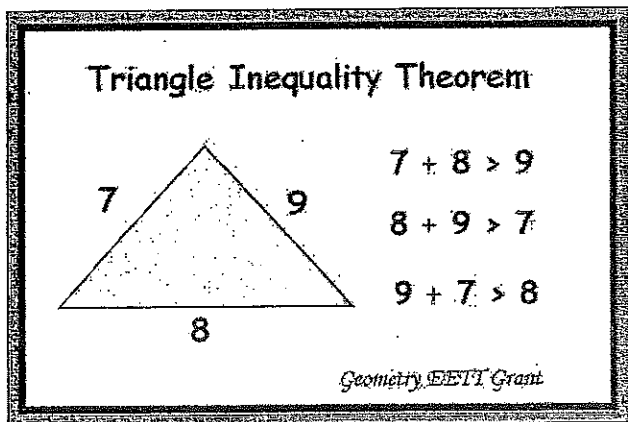


Triangle Inequality Theorem

The triangle inequality theorem states that any side of a triangle is always shorter than the sum of the other two sides.

Show your work to determine if the following form a triangle.

Examples:



1) 7, 5, 4

2) 3, 6, 2

3) 5, 2, 4

4) 8, 1, 4

Triangle Inequality Theorem- The sum of the lengths of any two sides of a triangle is greater than the length of the third side.

Can these numbers be the length of the sides of a triangle? Show math to prove your answer, using the Triangle Inequality Theorem. Then circle YES or NO.

1. 8, 9, 10

YES NO

2. 1, 1, 2

YES NO

3. 6, 9, 8

YES NO

4. 3, 4, 9

YES NO

5. 12, 4, 17

YES NO

6. 8, 7, 2

YES NO

7. 14, 3, 9

YES NO

8. 12, 18, 2

YES NO

9. 3, 2, 1

YES NO

10. Ralph has a pet rabbit and wants to build a pen for it. He has 3 pieces of lumber: one is 3 ft, one is 7 ft, and the other is 8 ft long. Can he build a closed triangular pen with these three boards (will the boards form a triangle)?

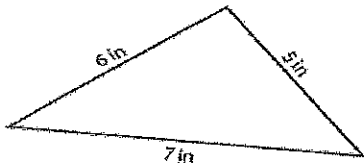
Triangle Inequality

Name: _____

th Grade Math

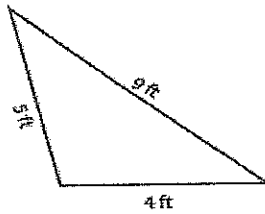
Applying triangle inequality theorem, identify whether the triangle is possible or not possible with the given measures.

1)

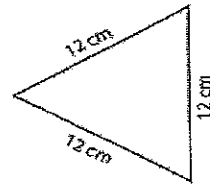


Triangle possible

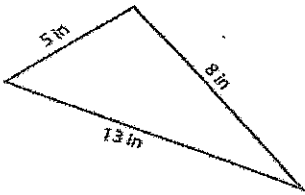
2)



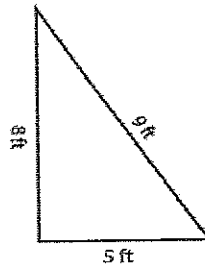
3)



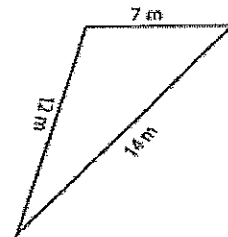
4)



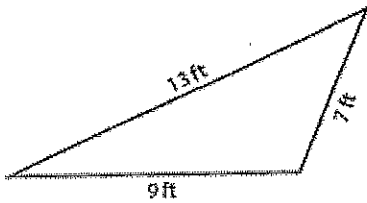
5)



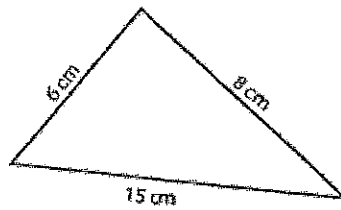
6)



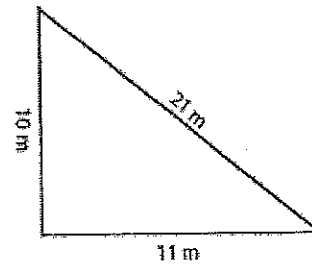
7)



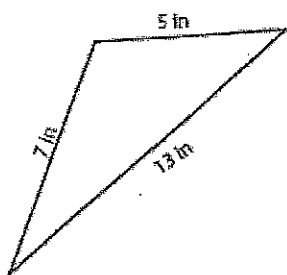
8)



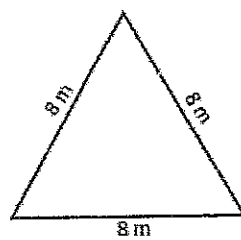
9)



10)



11)



12)

