

Geometry

Name _____

5.4 The Triangle Inequality

Date _____ Hour _____

Determine whether the given measures can be side lengths of a triangle. Write yes or no.

- 1) 9, 12, 15
- 2) 14, 14, 19
- 3) 0.7, 1.4, 2.1
- 4) 32, 41, 63

Find the range for the measures of the third side of a triangle given two side lengths.

- 5) 6 and 19
- 6) 13 and 27
- 7) 25 and 38
- 8) 42 and 6

Use distance formula or slope formula to determine if these coordinates can be triangle vertices.

- 9) R(1, 3) S(4, 0) T(10, -6)

10) Mike has 4 lengths of wood from which he can make borders for a small triangular-shaped herb garden. The lengths of the wood borders are 8 in, 10 in, 12 in, and 18 in. How many different triangular borders could Mike make? (Try illustrating each solution.)