Geometry 5.5

5.5 Use Inequalities in a Triangle

If one ________ of a triangle is ___________ than another _______, then the _________ _________ the _________ side is ___________ than the angle opposite the shorter side.

If one ________ of a triangle is ___________ than another _______, then the _________ opposite the _________ angle is ___________ than the side opposite the smaller angle.

List the sides in order from shortest to longest.

Triangle Inequality Theorem

The _________ of two _________ of a triangle is ___________ than the _________ of the _________ side.

\[ AB + BC > AC; AB + AC > BC; BC + AC > AB \]

A triangle has one side of 11 inches and another of 15 inches. Describe the possible lengths of the third side.

Find all possible values of \( x \).

Assignment: 331 #2, 6-34 even, 40-44 even, 49, 52, 54 = 22 total

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To be used with Larson Geometry, 2011