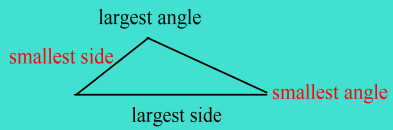## Ch 4.7 Triangle Inequalities
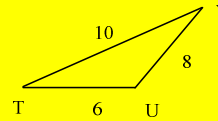
largest angle

smallest side

smallest angle

largest side

Th 4.10: If one side of the triangle is longer than the another, then the angle opposite the longer side is larger the angle opposite of the shorter.

Th 4.11: If one angle of a triangle is larger than another angle, then the side opposite the larger angle is longer than the side opposite the smaller angle.
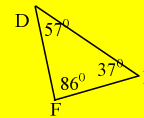
Dec 11-9:22 AM

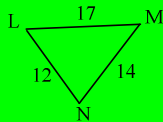
Ex1a)

V
10
8
T   6   U

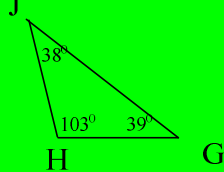Name the angles from largest to smallest:

Ex1b)

D 57°
      37° E
86°
F

Ex1b) Name the sides from longest to shortest:

Dec 11-9:27 AM

Try 1. Name the angles from largest to smallest:

L   17   M
12   14
    N

Try 2. Name the sides from longest to shortest:

J
38°

103°   39°
H   G

Dec 11-9:30 AM

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*Not every 3 segments can make a triangle.

Th 4.12: The sum of the lengths of any 2 sides of a triangle is greater than the length of the 3rd side.

Ex2a) 3, 5, 9

Dec 11-9:34 AM

Ex2b) 3, 5, 8

Dec 11-9:37 AM

Ex2c) 3, 5, 7

Dec 11-9:39 AM

1

Try 3.   5, 7, 13

Try 4.   6, 9, 12

Try 5.   10, 15, 25

Dec 11-9:40 AM