

Name : _____

Triangle Inequality

If the measures of two sides of a triangle are given, find the range of possible measures of the third side (x).

1) 9 in, 17 in

2) 30 yd, 11 yd

3) 4 ft, 7 ft

5) 22 yd, 18 yd

7) 34 in, 27 in

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9) Lily makes a triangular cat scratcher for her pet cat. If two of its sides, measure 8 inches and 15 inches, which of the following is the possible measure of its third side?

a) 18 inches

b) 7 inches

c) 24 inches

Name : _____

Answer key

Sheet 1

Triangle Inequality

If the measures of two sides of a triangle are given, find the range of possible measures of the third side (x).

1) 9 in, 17 in

2) 30 yd, 11 yd

$8 \text{ in} < x < 26 \text{ in}$

$19 \text{ yd} < x < 41 \text{ yd}$

3) 4 ft, 7 ft

$3 \text{ ft} < x < 11 \text{ ft}$

$x < 32 \text{ in}$

5) 22 yd, 18 yd

$4 \text{ yd} < x < 40 \text{ yd}$

$x < 13 \text{ ft}$

7) 34 in, 27 in

$7 \text{ in} < x < 61 \text{ in}$

$9 \text{ yd} < x < 39 \text{ yd}$

9) Lily makes a triangular cat scratcher for her pet cat. If two of its sides, measure 8 inches and 15 inches, which of the following is the possible measure of its third side?

a) 18 inches

b) 7 inches

c) 24 inches