

Name : _____

Triangle Inequality

Sheet 3

Determine if the three lengths can be the measures of the sides of a triangle.

1) 20 ft, 16 ft and 38 ft

2) 4 yd, 6 yd and 3 yd

3) 14 yd, 19 yd and 30 yd

5) 24 in, 9 in and 12 in

7) Mary forms a triangle by pasting the edges of three popsicle sticks. What are the possible lengths of the sticks used by Mary?

a) 3 in, 4 in, 5 in

b) 13 in, 2 in, 11 in

c) 10 in, 4 in, 5 in

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36 in

34 ft

Triangle Inequality

Determine if the three lengths can be the measures of the sides of a triangle.

1) 20 ft, 16 ft and 38 ft

2) 4 yd, 6 yd and 3 yd

$16 + 38 > 20$

$20 + 16 \not> 38$

$38 + 16 > 20$

$4 + 6 > 3$

$6 + 3 > 4$

$3 + 4 > 6$

The sides do not form a triangle.

3) 14 yd, 19 yd and 30 yd

36 in

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$14 + 30 > 19$

$30 + 19 > 14$

$19 + 14 > 30$

The sides form a triangle.

The sides do not form a triangle.

5) 24 in, 9 in and 12 in

34 ft

$24 + 12 > 9$

$9 + 24 > 12$

$12 + 9 \not> 24$

The sides do not form a triangle.

The sides form a triangle.

7) Mary forms a triangle by pasting the edges of three popsicle sticks. What are the possible lengths of the sticks used by Mary?

a) ~~3 in, 4 in, 5 in~~

b) 13 in, 2 in, 11 in

c) 10 in, 4 in, 5 in