

Name : \_\_\_\_\_

## Triangle Inequality

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

1) 11 yd, 15 yd and 27 yd

2) 39 in, 28 in and 23 in

3) 4 in, 5 in and 7 in

5) 8 ft, 15 ft and 20 ft

**PREVIEW** ft

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d 29 yd

7) If Jack cuts a chart as a scalene triangle, which of the following sets are the possible side lengths of the triangle?

a) 7 in, 23 in, 14 in

b) 3 in, 4 in, 7 in

c) 5 in, 6 in, 8 in

**Triangle Inequality**

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

1) 11 yd, 15 yd and 27 yd

2) 39 in, 28 in and 23 in

$11 + 15 \not> 27$

$15 + 27 > 11$

$27 + 11 > 15$

$39 + 28 > 23$

$28 + 23 > 39$

$23 + 39 > 28$

The sides do not form a triangle.

3) 4 in, 5 in and 7 in

$4 + 5 > 7$

$5 + 7 > 4$

$7 + 4 > 5$

The sides form a triangle.

5) 8 ft, 15 ft and 20 ft

$8 + 15 > 20$

$15 + 20 > 8$

$20 + 8 > 15$

The sides form a triangle.

7) If Jack cuts a chart as a scalene triangle, which of the following sets are the possible side lengths of the triangle?

a) 7 in, 23 in, 14 in

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The sides form a triangle.