Triangle Inequality Exploration

a = 12

b = 7

c = 10

Move the colored points above to adjust the side lengths.
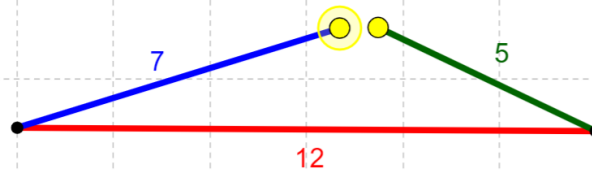
Can you make a triangle with the 3 known side lengths?

Yay, you made a Triangle!

7

10

12
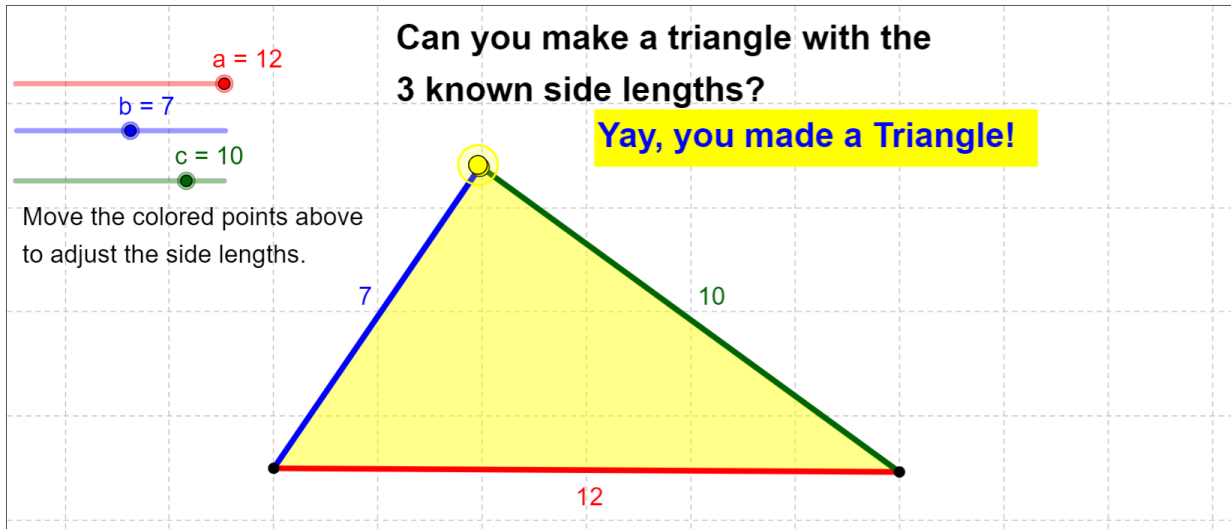
7+10=17>12　　　7+12=19>10　　12+10=22>7

*the sum of two sides of a triangle must always be greater than the third
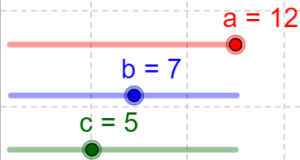
GeoGebra   🔍 Search

a = 12
b = 7
c = 5

Can you make a triangle with the 3 known side lengths?

Move the colored points above
to adjust the side lengths.

7   5
12

Move the yellow points to move the two free sides to try and form a triangle.

NOT A TRIANGLE – WHY? 7+5=12=12 THE TWO SIDES ARE EQUAL TO THE THIRD SIDE NOT GREATER THAN.

a = 8
b = 3
c = 2

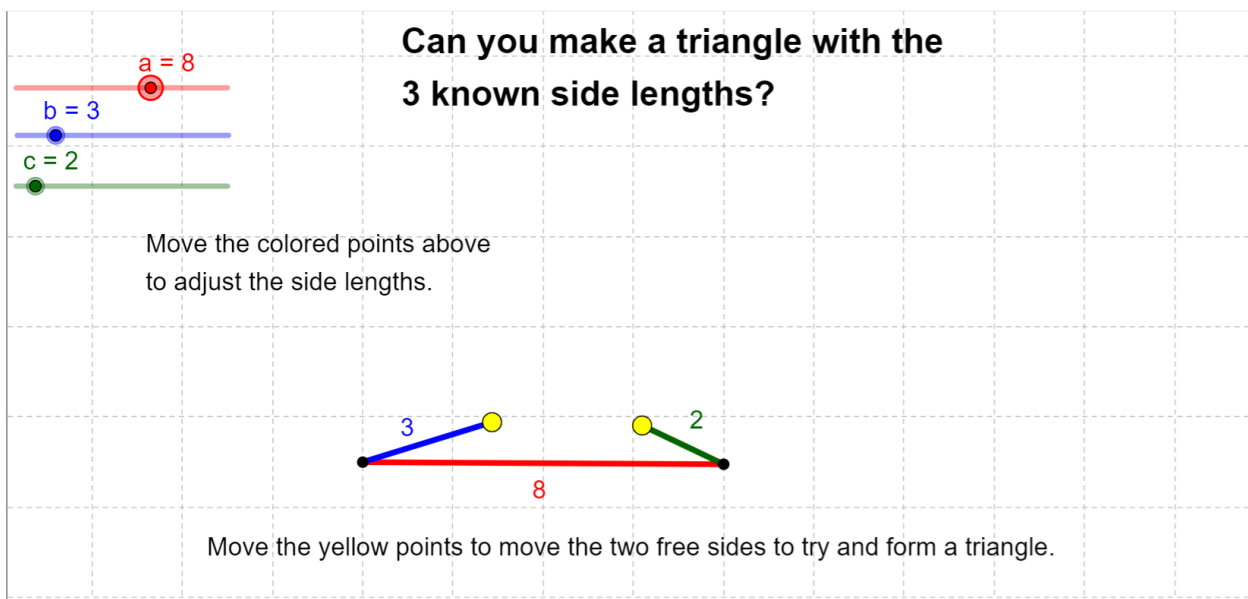**Can you make a triangle with the 3 known side lengths?**

Move the colored points above
to adjust the side lengths.

3   2
8

Move the yellow points to move the two free sides to try and form a triangle.

NOT A TRIANGLE? 3+2=5 5<8 THE SUM OF THE TWO SIDES ARE LESS THAN THE THIRD SIDE!