




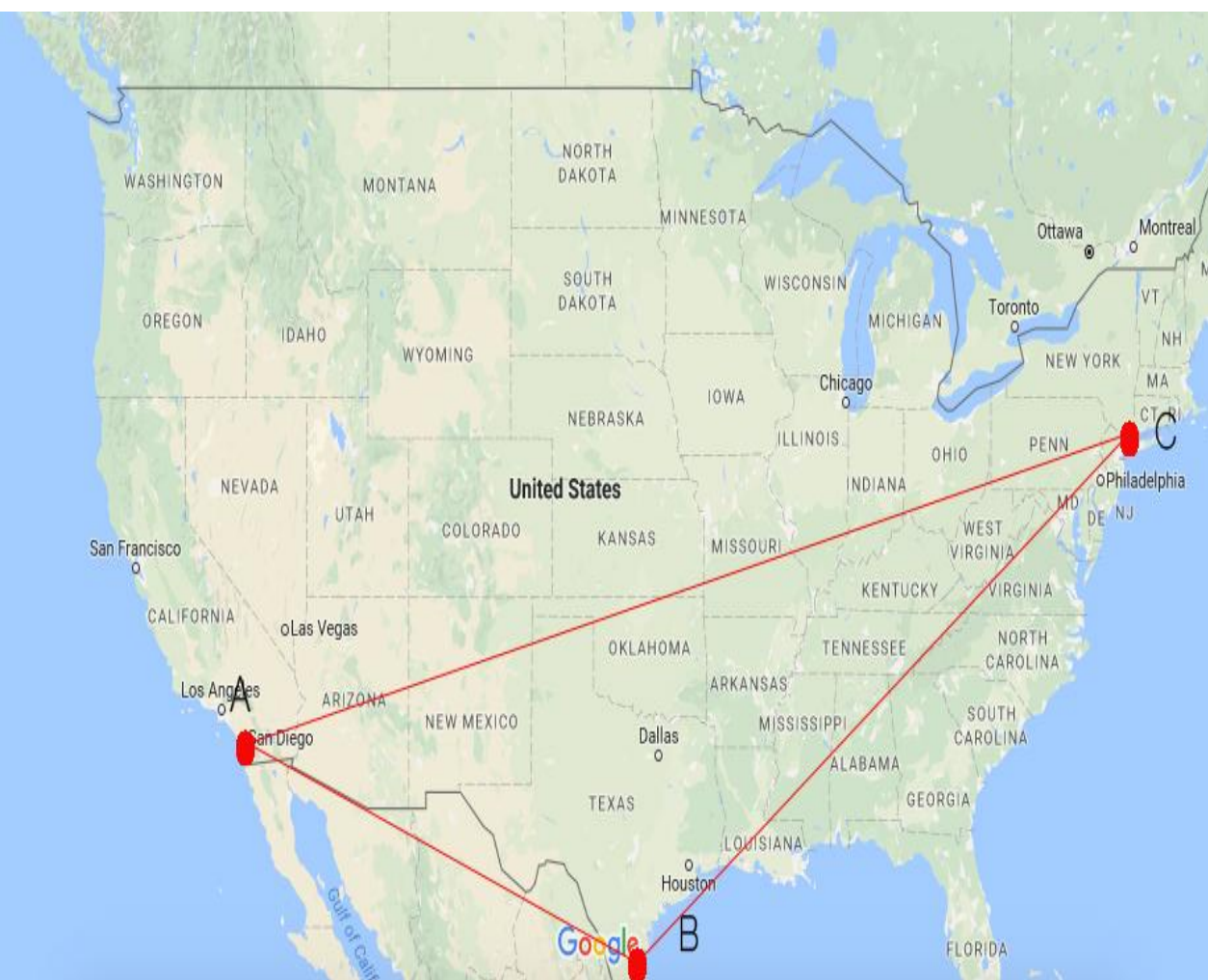
# Distance in the World

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Our question

Where on Earth can two triangles  
(length measured in distance) be the  
same?



Point A- San Marcos, CA

Point B- McAllen, TX

Point C- Bronx, New York

A to B= 1541 Miles

A to C= 2833 Miles

B to C=1991 Miles



Point A- Banjul, Gambia

Point B- Wa, Ghana

Point C- Ati, Chad

A to B= 1541 Miles

A to C= 2833 Miles

B to C=1991 Miles

# Heron's Formula

*Triangle by Heron's formula*

$$(1) \text{ area: } S = \sqrt{s(s-a)(s-b)(s-c)}$$

$$s = \frac{(a+b+c)}{2}$$

Step 1-- Solving for S

$$S = (A+B+C)/2$$

$$(1541+2833+1991)/2 = 3182.5$$

Step 2-- Calculating Area

$$S = \sqrt{s(s-a)(s-b)(s-c)}$$

$$3182.5(3182.5-1541)(3182.5-2883)(3182.5-1991)=$$
$$1474943.0882773707 \text{ square miles}$$

Answer

1474943.0882773707 square miles