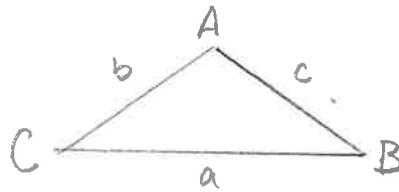


1) We know that the area of any triangle is  $\frac{1}{2} ab \sin C$ .

If we label triangle 1 as follows:



The area =  $\frac{1}{2} ab \sin C$

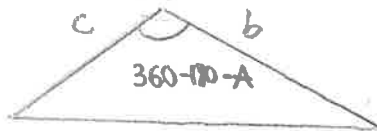
2) If we label triangle 2 as follows:



\* angles round a point =  $360^\circ$   
There are two right angles ( $90^\circ$ )

The area =  $\frac{1}{2} ab \sin(180-C)$

3) If we label triangle 3 as follows:



\* " "

The area =  $\frac{1}{2} bc \sin(180-A)$

4) If we label triangle 4 as follows:



The area =  $\frac{1}{2} ac \sin(180-B)$

5)  $\sin C = \sin(180-C)$

6) This is the same for all the other triangles so all the triangles have the same area.

