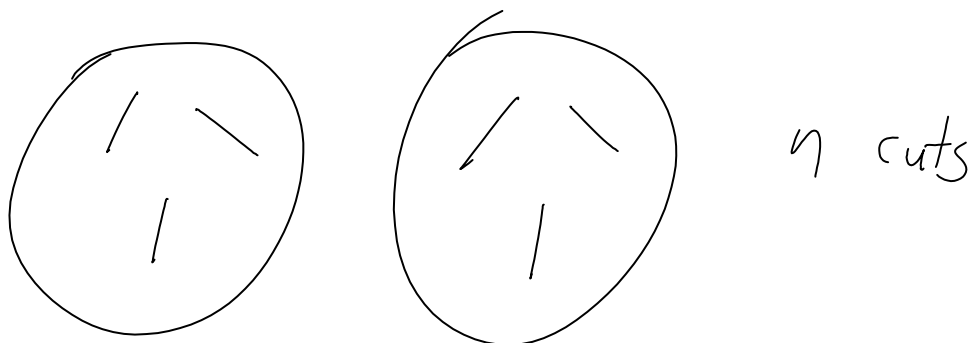


# Double Branched Covers

September-29-08  
3:36 PM

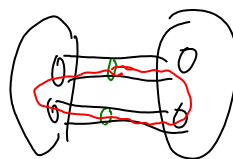
Q: Understand the topology of the gluing below:



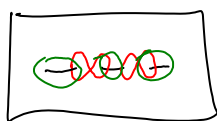
equivalently,



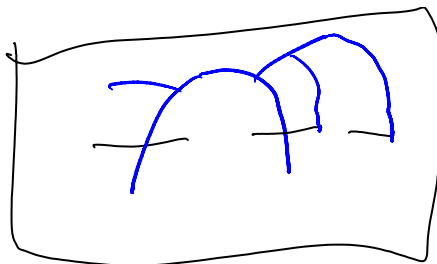
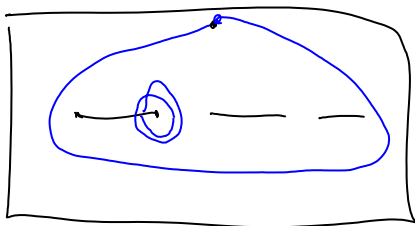
so its gluing two spheres using  $n$  tunnels - a genus  $(n-1)$  surface.



$\Rightarrow$  there should be  $(2n-2)$  closed curves on

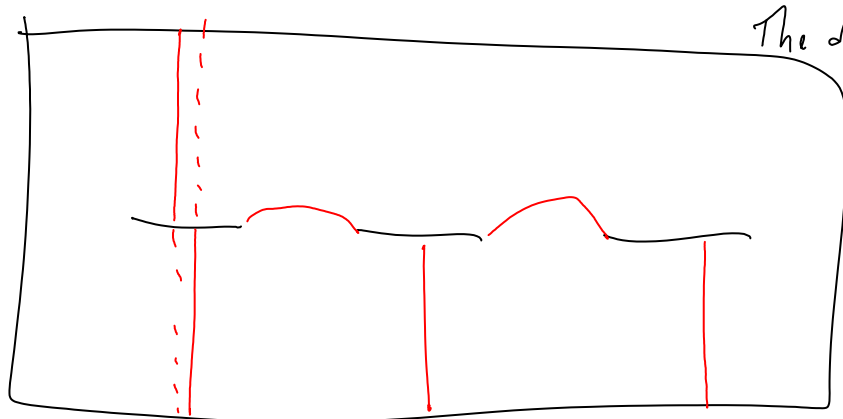


representing  $H_1$ ; and we should understand how to reduce any other curve to a combination of Rose



$\langle a_i, b_i : a_i^2 = 1, b_i^2 = 1, \prod a_i b_i = 1 \rangle_{\text{even}}$   
 even words commute.

$$\cong \text{FA} \langle a_i b_i \mid_{i=1}^{n-1} ; b_i a_{i+1} b_i a_{i+1} \rangle$$



The dual cuts

