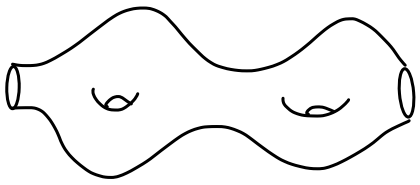
Thm The functor

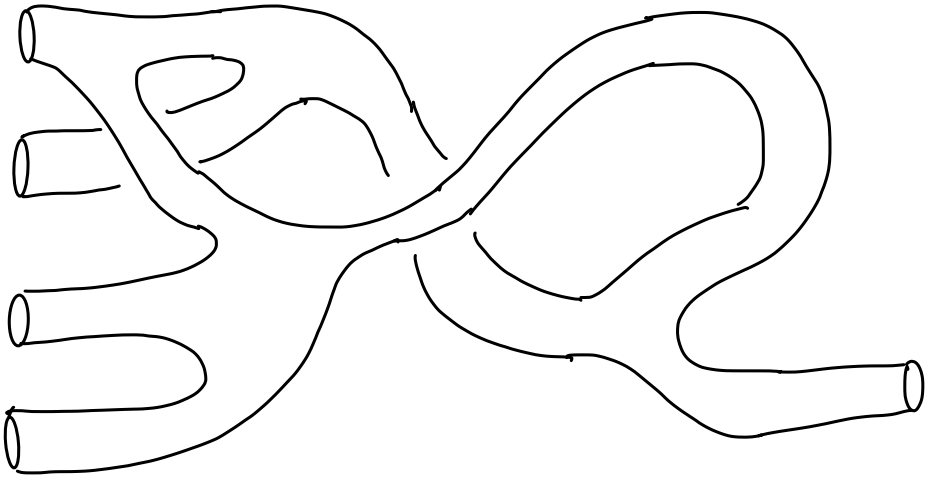
$$\begin{cases} TFT_2^{or} \longrightarrow cFrob \\ \mathbb{Z} \longmapsto Z(S^1, \mathfrak{I}) \end{cases}$$

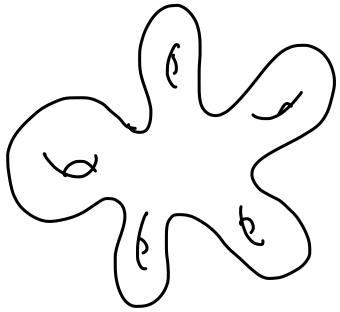
is an equivalence of groupoids.

---

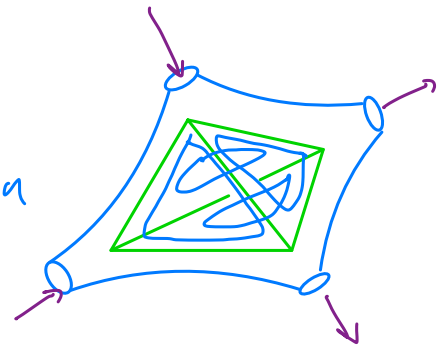
① Given a Frobenius algebra A, what does $\mathcal{Z}_A$, the associated 2d oriented TFT, assign to

(a)  ?

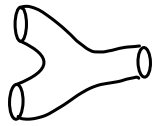
(b)  ?

(c) 

(d) "flattened" tetrahedron w/ punctures at "corners"

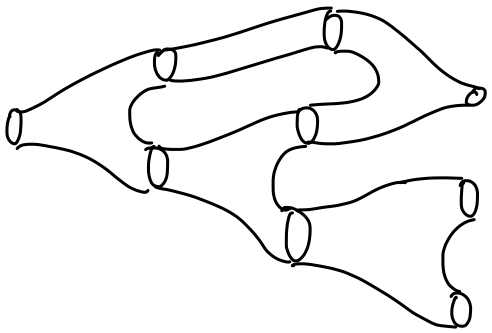


(2) Sufficiency of relations p. 73ff. Use

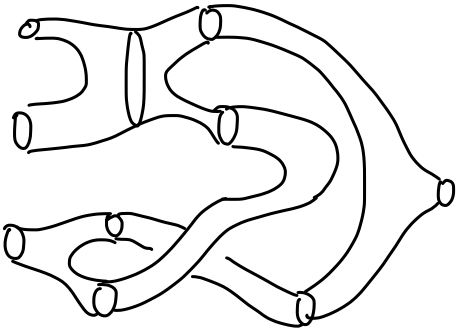
(1) moving  left

(2) eliminating twists

Use the definition of a Frobenius algebra / (1) & (2) step by step to explain why the images of



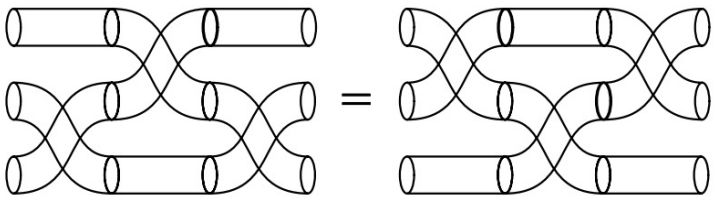
and



are well-defined

(3) Normal form version for non-connected surfaces (p. 76)

·) Explain what this expresses:



·) Explain how to reduce to a composition of permutation bordisms and disjoint unions.