Goals: 1. Quickly finish swaddling/framing
2. Start w/ proof of main thm.

\[ \eta (\beta) = \int \Phi^* \omega \quad \text{sl}_2 (\gamma, \nu) = \ell (\gamma, \delta + \epsilon \nu) \]

An alternative definition of \( \text{sl}_2 \):

\[ \nu \] defines a homotopy \( H : \gamma \to \delta \),

\[ \text{overall get } \Phi_\nu : T^2 \to S^2 \]

\[ k \text{ set } \text{sl}_2 = \text{deg } \Phi_\nu \]

There is a pairing \( < \gamma, \beta > \in \mathbb{Z} \) between framings and swaddling maps:

\[ \psi_{\gamma, \beta} \]

Thm: By declaring \( \beta \leftrightarrow \nu \Leftrightarrow < \nu, \beta > = 0 \),

there is a bijection between (homotopy classes of) swaddling maps and odd framings.

If \( \beta \leftrightarrow \nu \), then \( \text{sl}_1 (\gamma, \nu) = \text{sl}_2 (\delta, \beta) \).

Proof: HW.

Blatantly false theorem.
Blatantly False theorem.

\[ Z_1(Y) = \sum_{D \in \text{Aut}(D)} \int_{E \in D_{\text{int}}(D)} \Phi^* \omega \in D^{-1} \]

is knot invariant. Furthermore,

1. It is a UFTI/Expansion, hence solving the problem to be posed on Monday.

2. It is the evaluation of the CS QFT, to be defined on Friday.

Fixing Thom (-1)

1. The internal edges of \( D \) must be oriented.
2. The sets \( V_i, V_s \) must be ordered.

\[ D^{-1} = \langle \text{v.s. spanned by connected trivalent D's with skeleton S', oriented edges \& ordered V_i, V_s} \rangle / \text{re-ordering of}\ V_i, V_s \]

Lemma \( D^{-1} \equiv \langle \text{trivalent connected with skeleton S', unoriented internal edges, unoriented V_i, V_s, \& \text{"oriented internal verts"} \rangle / \chi + \chi = 0 \)

Proof...