Most of the goal today is to remove most of the "wishful thinking" hypothesis.

\[ \frac{\text{trident}}{3-\text{prism}} \rightarrow \mathcal{D}_n \rightarrow \mathcal{D}_n' \rightarrow \mathcal{D}_n'' \text{ via } \text{om-quadrivalent} \]

\[ \mathcal{D}_n' \rightarrow \mathcal{D}_n'' \]

\[ Z_0 = \bigoplus \mathbb{Z} \text{ knot } \rightarrow \bigoplus \left[ \mathbb{Z}_n \hat{\mathcal{H}} \right] \text{ on board} \]

\[ \text{prop. IF invariant, } Z_0 \text{ is a UFTI.} \]

**The Hidden Faces:** [new only consider connected clusters]

1. \( G \) has a vertex \( v \) connected to the outside via only one internal edge:

2. \( G \) has a vertex \( v \) connected to the outside via exactly two internal edges:

\[ \implies \text{The only hidden faces that remain are the...} \]
The only hidden faces that remain are the "anomalous faces"

Probably next week:

\[ \mathbf{\Phi} := \begin{cases} \text{trivalent, connected} \quad \text{after removal of slab,} \\ \text{all else the same} \end{cases} \Rightarrow 0 \]

\[ \mathcal{C} \xrightarrow{\text{ano}} \times \Phi \xrightarrow{(S^2)E_i} \]

The skeleton points in same 5x direction \( l \). Then take \[ \frac{\text{TT}}{S^2} \]

\[ \mathcal{C} / \text{translations} \times \text{rotations about } l \]
\[ \text{dim } 3|V| + |V|_1 = 2|E|_1 \]
\[ \text{dim } 3|V|_1 + |M| - 2 \]

The \( \hat{W} E_i \) is a 2-form on \( S^2 \) ...