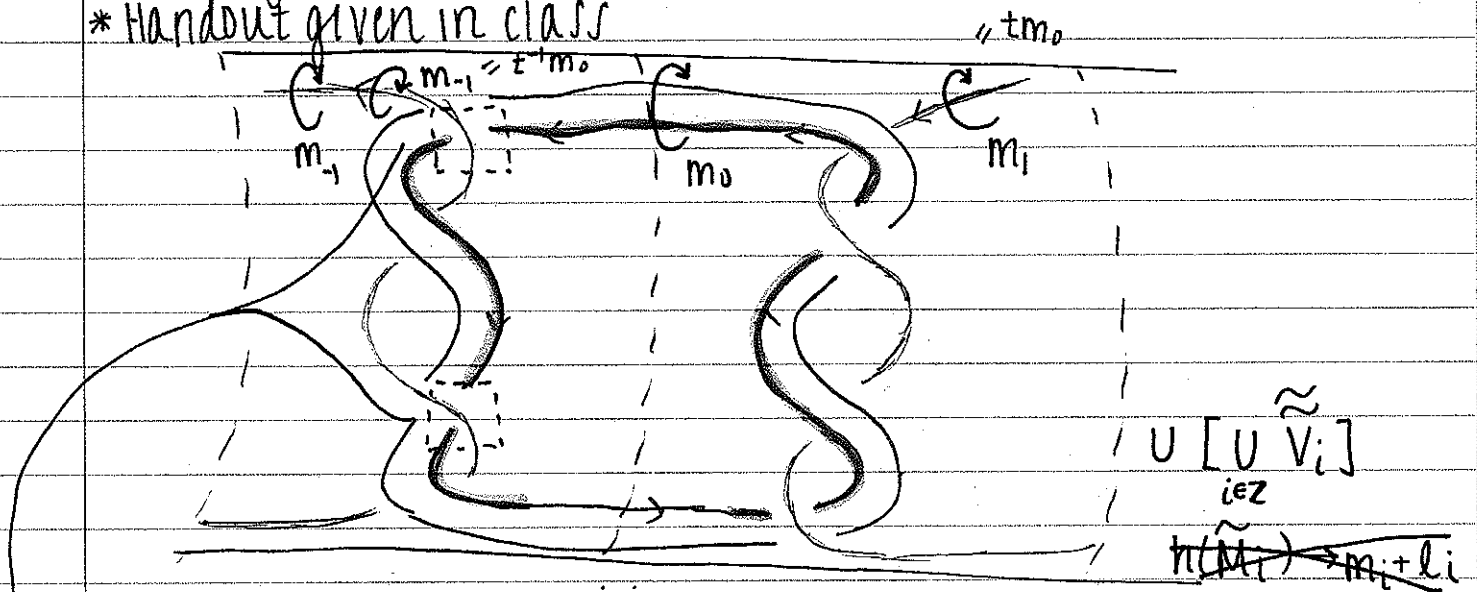


Thursday, March 4, 2010

\* Handout given in class



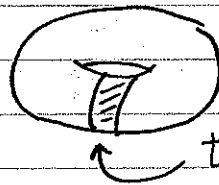
piece of infinite cyclic cover of example in handout

As a group:

$$H_1(X) = H_1(\mathbb{P}^3 - \mathbb{S}^2) = (m_i \mid \sum_{i \in \mathbb{Z}} m_{i-1} + \sum_{i \in \mathbb{Z}} m_{i+1} - 3m_i)$$

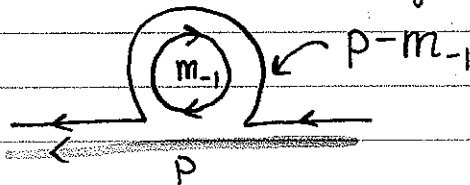
$$\textcircled{1} D_i \subset \tilde{V}_i \ni \partial D_i = \tilde{M}_i$$

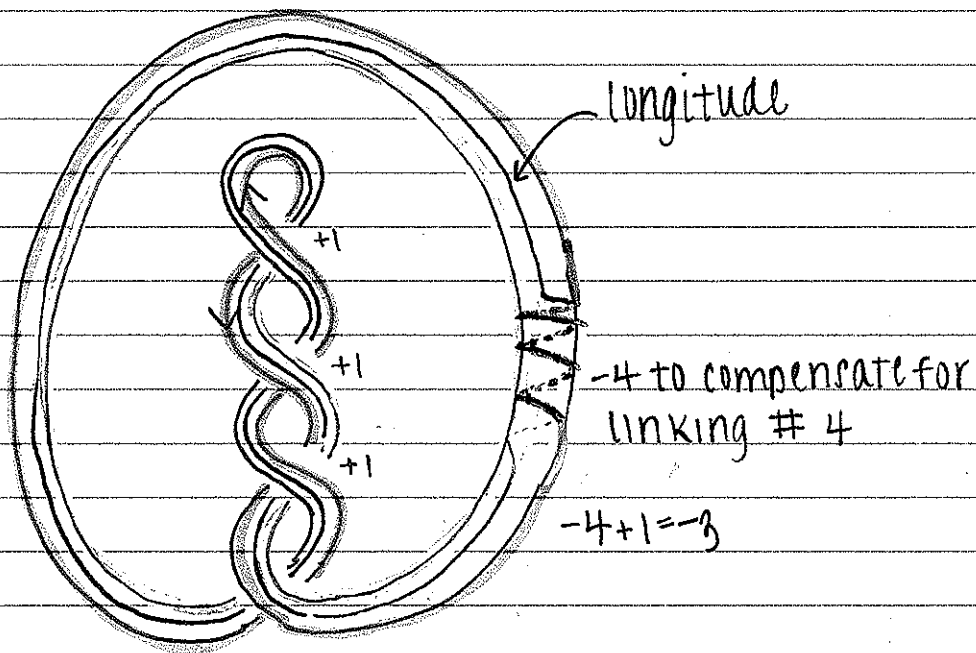
$$N(D_i) \subset \tilde{V}_i$$



thickened meridian

$p \rightarrow -2m_{-1} - 2m_{+1}$  lives on top of green curve





Writhe = +4

$$p + 2m_{-1} - 2m_1 + 3m_0 = 0 \quad \text{since we've pulled } p \text{ out of green \& orange curve}$$

$$\Rightarrow p = 2m_{-1} + 2m_1 - 3m_0 = 0$$

$\curvearrowright D_i$

NOTE: sum of coefficients equals +1.

As a  $\Delta$ -module:

$$H_1(\tilde{X}) = H_1(S^3 - 5\gamma) = (m \mid 2m + 3tm + 2t^2m)$$

$$= (m \mid m(\gamma + 3t + 2t^2))$$

$$= (m \mid m(\gamma t^{-1} - 3 + 2t))$$