

$$H_1\left(\mathbb{C}\!\!\setminus\!\! n\right)=H_*\left(\mathbb{C}\!\!\setminus\!\! n\right)\asymp \mathbb{Z}^n \text{ mod space}$$

$$H^1\left(\Sigma\!:\!\mathbb{Z}\right)\asymp \mathbb{Z}^{2g} \text{ phase space}$$

$$\begin{aligned} \mathcal{M}_n^0 &= \mathcal{M}_{0:1:\infty:n-3}^0 = \overbrace{\mathbb{C}\!\!\setminus\!\! 0:1}^{\times}{}^{n-3} = \frac{z_4\!\!:\!\!\cdots\!\!:\!z_n\in\widehat{\mathbb{C}\!\!\setminus\!\! 0:1}^{n-3}}{\bigwedge_{i< j} z_i\neq z_j} \\ &= \frac{z_4\!\!:\!\!\cdots\!\!:\!z_n\in\mathbb{C}^{n-3}}{\bigwedge_{i< j} z_i\neq z_j\colon\bigwedge_k z_k\neq 0\colon z_k\neq 1} = \frac{z_4\!\!:\!\!\cdots\!\!:\!z_n\in\mathbb{C}^{n-3}}{\prod_{i< j} \left(z_i-z_j\right) \prod_k z_k \left(1-z_k\right)\neq 0} \\ &\mathsf{C}|n\ltimes \overbrace{\mathbb{C}\!\!\setminus\!\! 0:1}^{\times}{}^{n-3} \xrightarrow[\text{act}]{} \overbrace{\mathbb{C}\!\!\setminus\!\! 0:1}^{\times}{}^{n-3} \end{aligned}$$