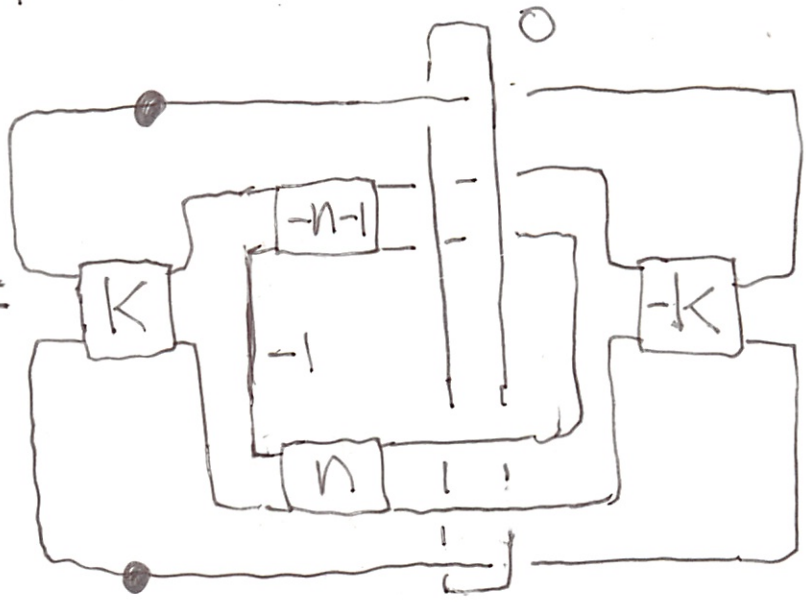
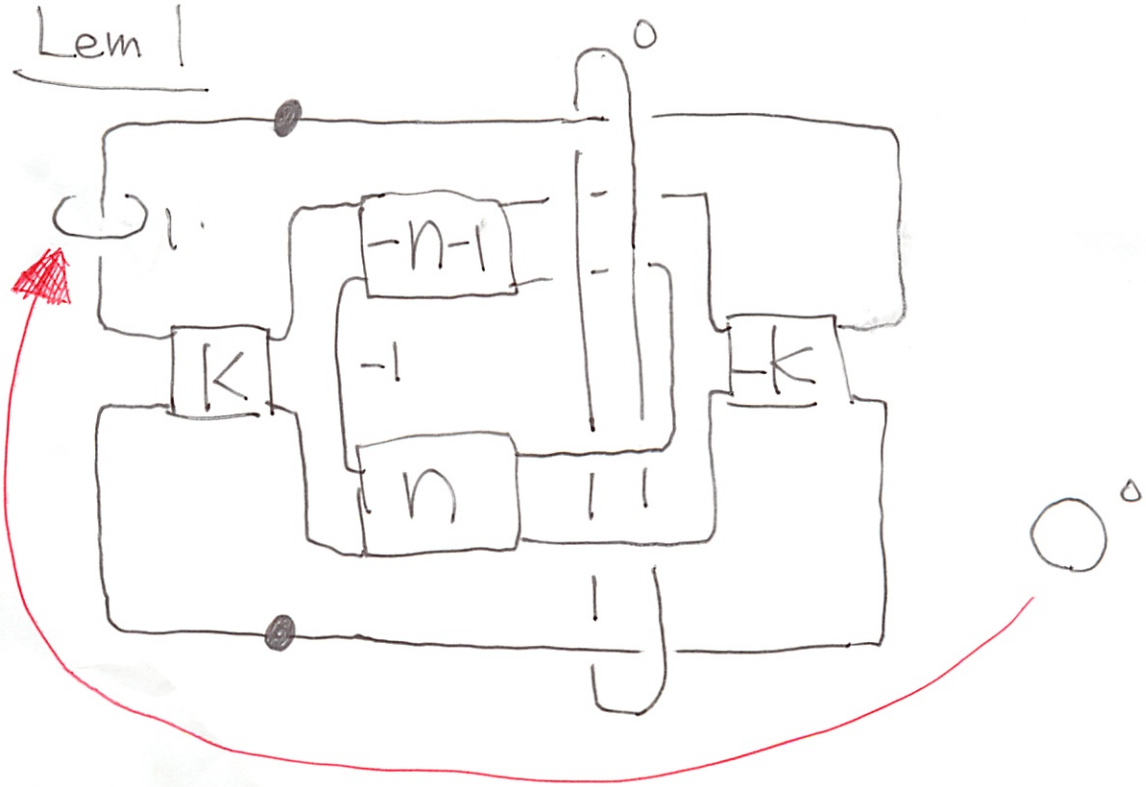
$n \in \mathbb{Z}$, $k > 0$

$H_{n,k} :=$



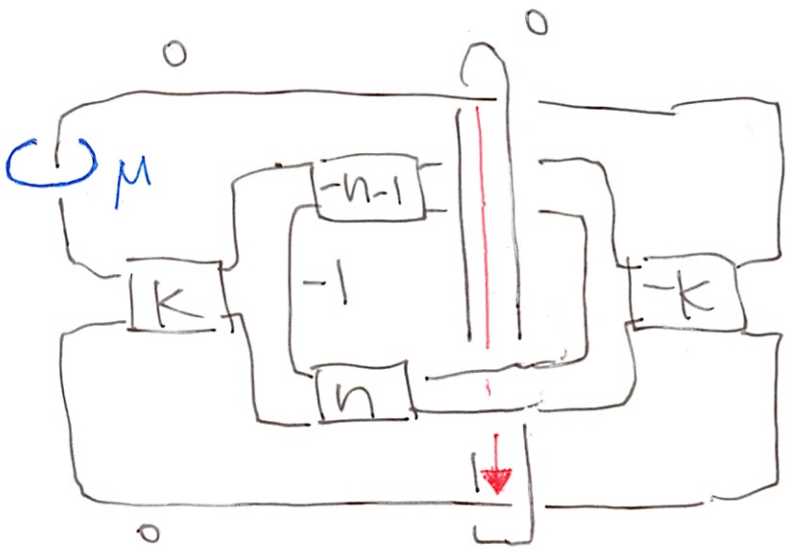
Thm (Gompf) $H_{n,k} \approx B^4$

Lem 1

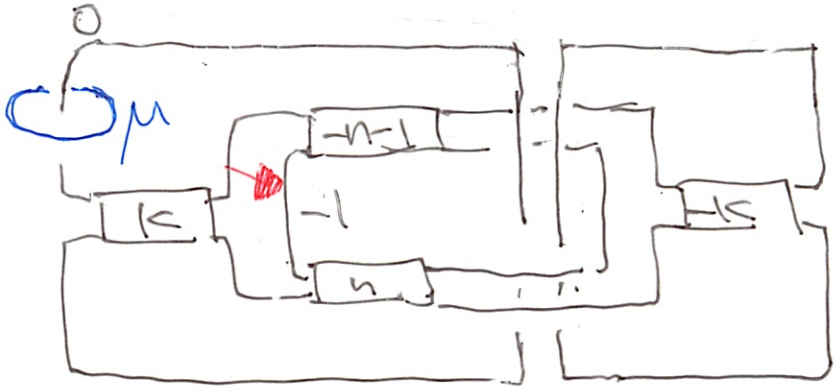


Proof

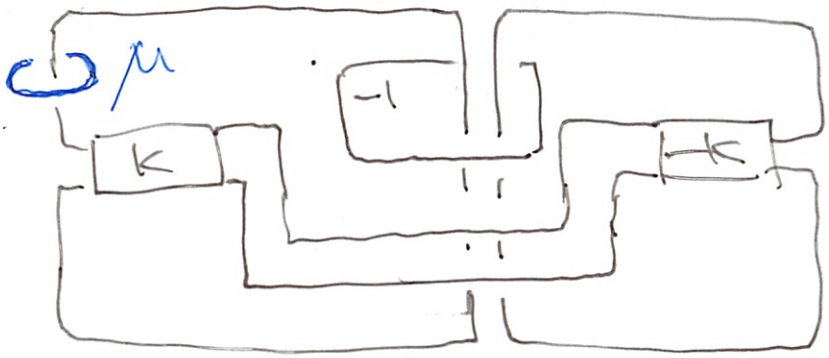
$\partial H_{n,k} \sim$



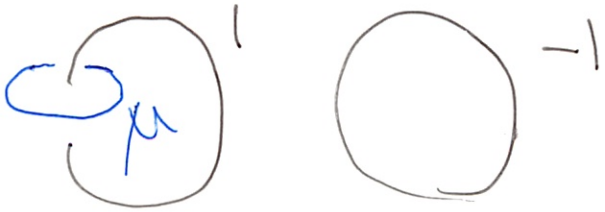
slide
~
canceling



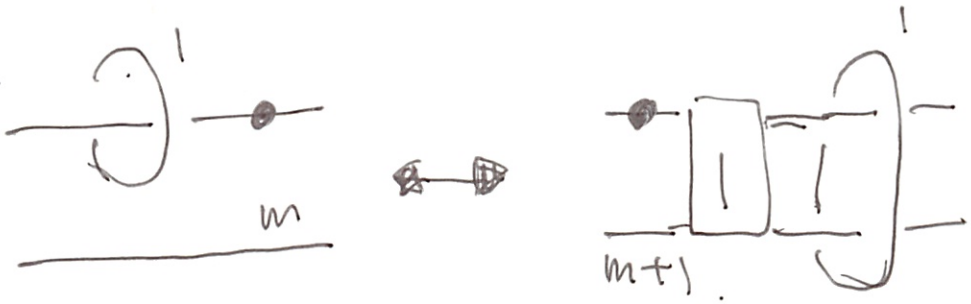
slide
~



isotopy
~



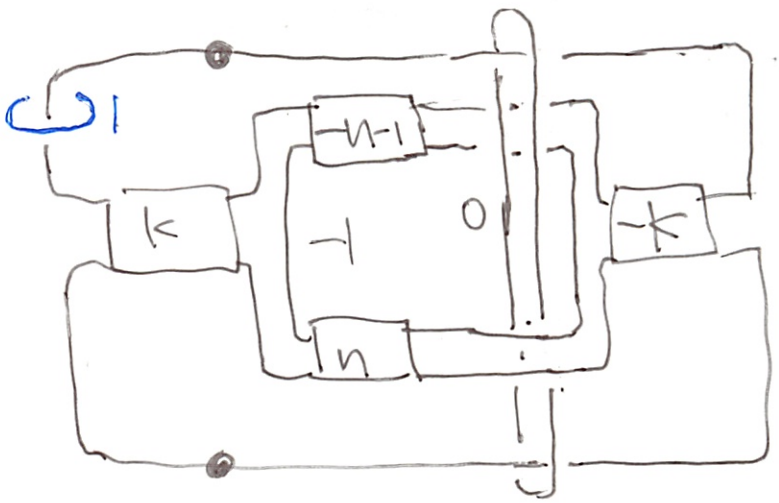
Lem 2



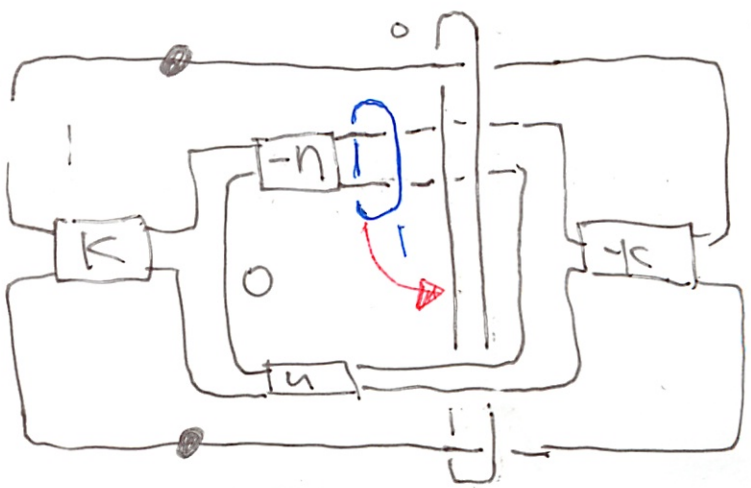
Proof of Thm

First, we prove $H_{n,k} \simeq H_{0,k}$.

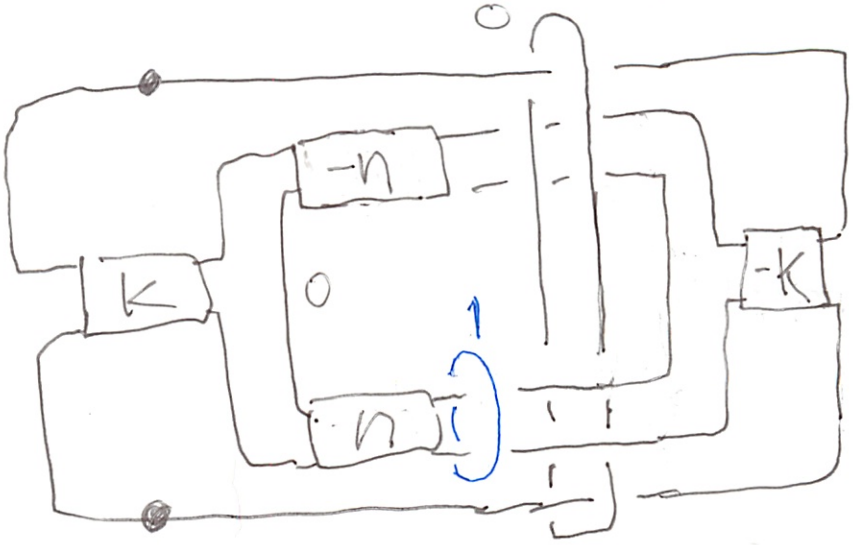
adding $\sim$ Lem 1



Lem 2 $\sim$

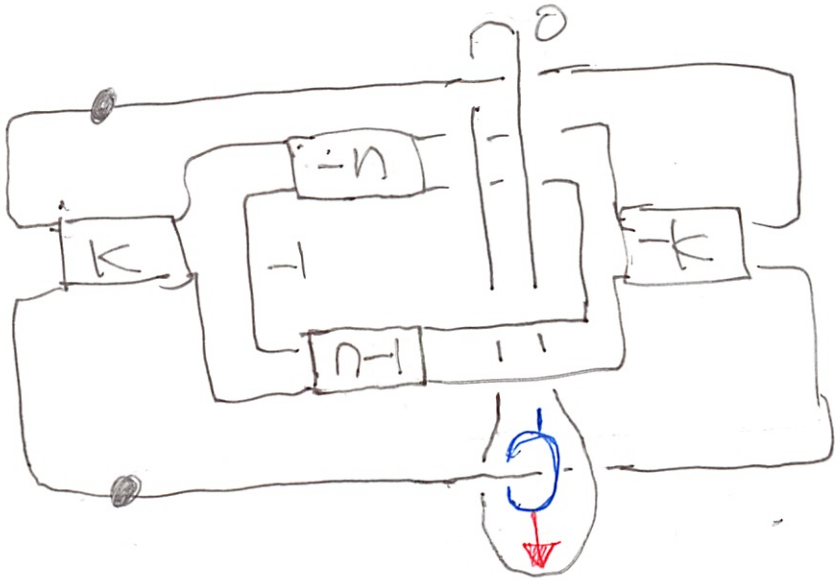


slide



Lem2

isotopy



slide

Lem1

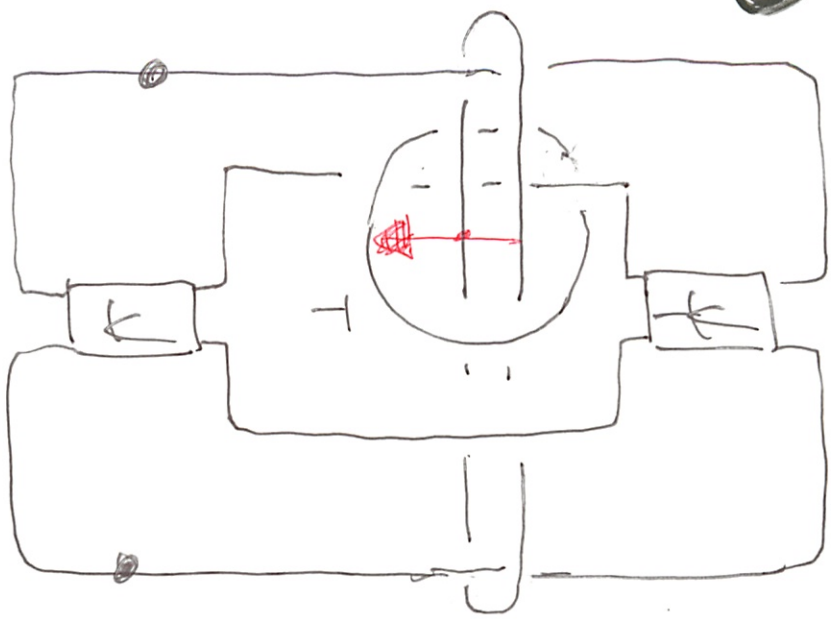
canceling

$H_{n-1,k}$.

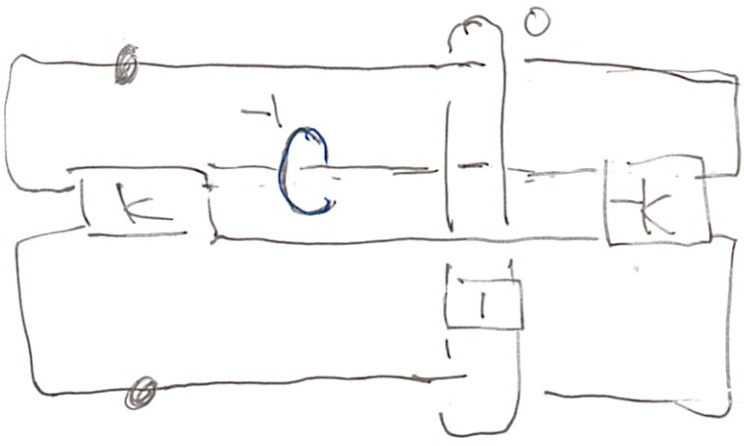
$\vdots$

$\sim H_{0,k}$

$H_{0,k} :=$



slide ~



$\simeq B^4$

補足

Lem X ... 2-handlebody.

h_c^3 $(c=1,2)$ ... 3 handles

s.t. $\partial(H \cup h_c^3) \simeq S^3$.

$\Rightarrow H \cup h_1^3 \underset{\text{diffeo}}{\simeq} H \cup h_2^3$

(3 handle の接着の一意性)