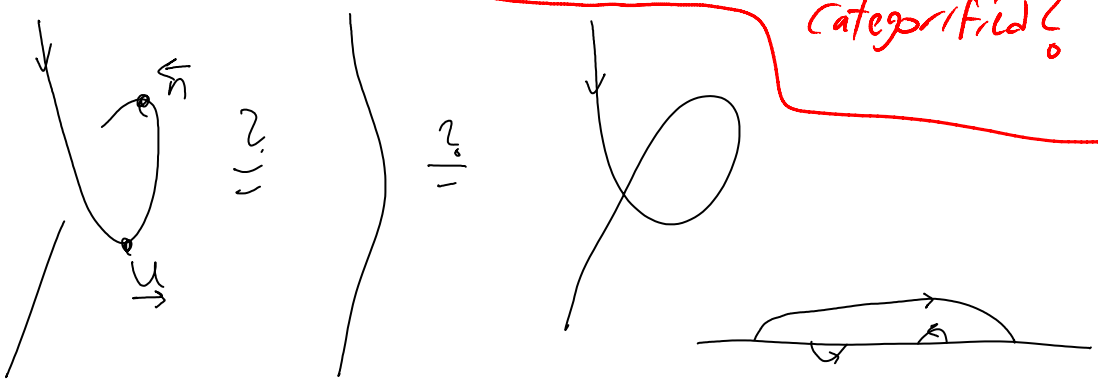


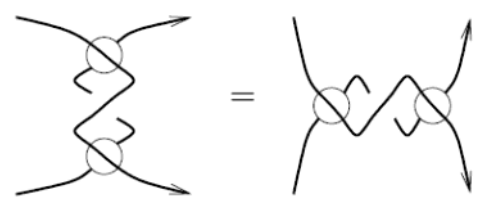
A long term question: Can the universal R/G invariant be categorified?



Morals: 1. Aim to understand situations where $\vec{n} \neq \overleftarrow{n}$ and $\underline{u} \neq \overleftarrow{u}$

2. Derive conditions on $\underline{u}, \overleftarrow{u}, \vec{n}, \overleftarrow{n}$ from the XII picture.

From papers/V-Dims:



Question IF we prove "formality" for some class of marked R/G tangles, how will it imply "weak formality" (that there is an expansion, maybe not homomorphic) for unmarked R/G tangles?

Question. Is all this somehow related to the fact that cup products are (super-)commutative?

(probably not, even though some similarity exists.)



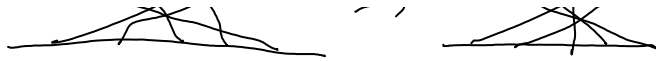
Is $D = \text{II} - \text{X}$ well defined? ^{of course} $D=0$.
 Any higher D 's are well defined?
 $2 \begin{matrix} \text{IIII} \\ 1234 \\ 1432 \end{matrix} - \begin{matrix} \text{2341} \\ \text{XXXX} \end{matrix} - \begin{matrix} \text{4123} \\ \text{XXXX} \end{matrix} + \begin{matrix} \text{3214} \\ \text{XXXX} \end{matrix} - 2 \begin{matrix} \text{4321} \\ \text{XXXX} \end{matrix}$ } no comb. equals 0.
 (no higher ones, according to 2009-09/ Derivations on Redover Green.nb

$R = \text{II} + \text{X} +$

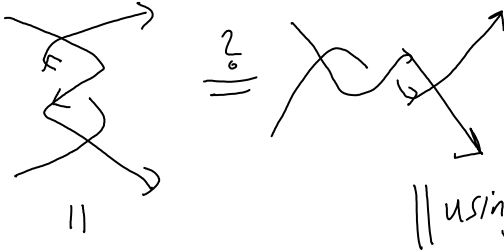
$D =$



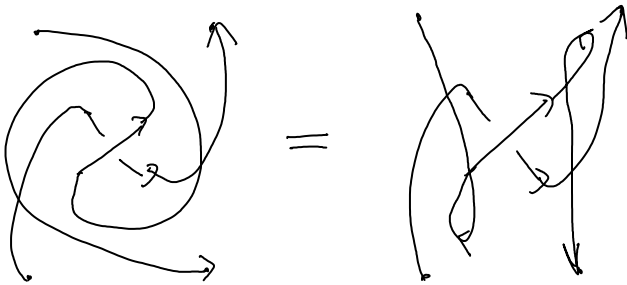
||
 54312
 ||
 54321
 ||
 54,231
 ||
 45231



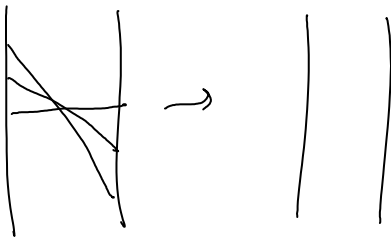
The all-virtual subcase:



|| using 2 VRI's!



At global level, is \mathbb{K}^n filtered (i.e., does one ever need to go up before coming down?)?



Likely it is indeed filtered.

