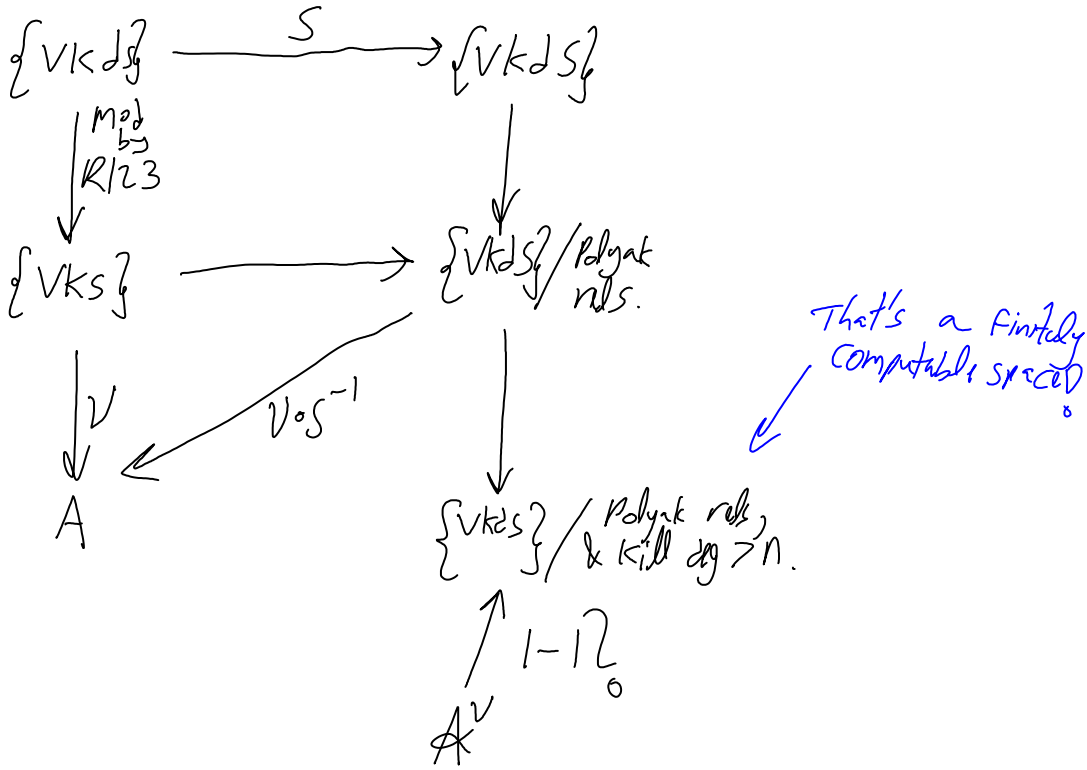
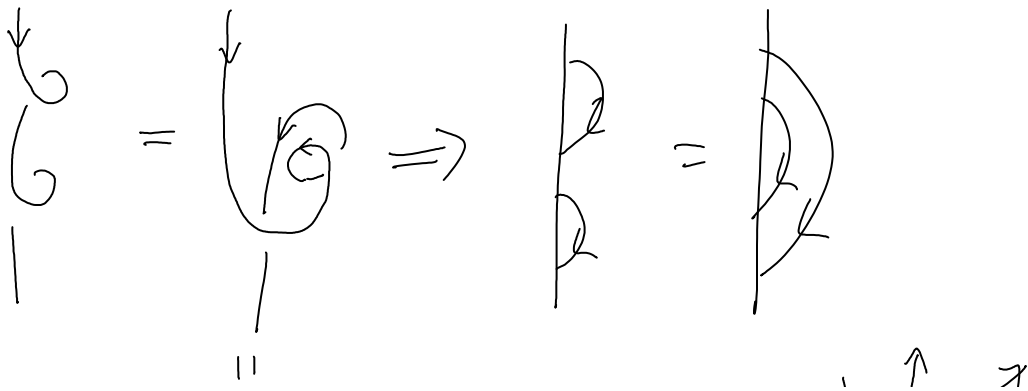


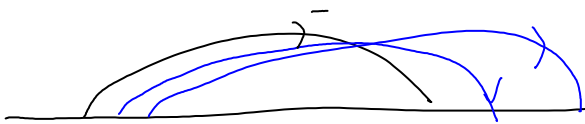
GPV's Universal Invariant

August-17-09
9:48 PM



$$\sigma_{12} \sigma_{13} \sigma_{23} = \sigma_{23} \sigma_{13} \sigma_{12} \Rightarrow \sigma_{23}^{-1} \sigma_{13}^{-1} \sigma_{12}^{-1} = \sigma_{12}^{-1} \sigma_{13}^{-1} \sigma_{23}^{-1}$$





$$A \sim B \Rightarrow A^{-1} \sim B^{-1} ?$$

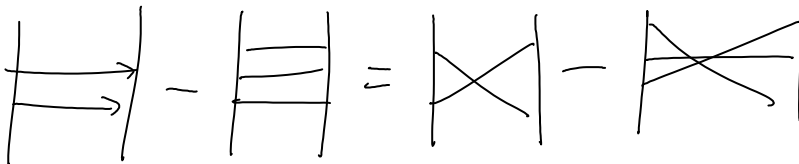
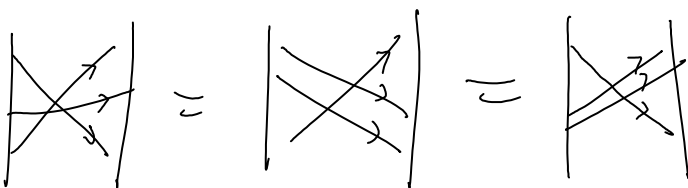
$$A^{-1} \sim A^{-1} A A^{-1} \sim A^{-1} B A^{-1}$$

$$\begin{aligned} ba=1 \quad ac=1 \\ \Rightarrow \\ b=baac=c \end{aligned}$$

$$\begin{matrix} AC \sim I & BD \sim I & A \sim B & \stackrel{?}{\Rightarrow} & C \sim D \\ CA \sim I & DB \sim I & & & \end{matrix}$$

proof

$$C \sim CBD \sim CAD \sim D$$



$$n=2) \quad \begin{matrix} 12 \\ 21 \end{matrix}$$

$$\begin{matrix} 123 \\ 132 \\ 213 \\ 231 \\ 312 \\ 321 \end{matrix}$$

$$\begin{matrix} 123=132=213 \\ 231=321=312 \end{matrix}$$

$$A_n \rightarrow \mathcal{P}_n \rightarrow \mathcal{P}_{n-1} \rightarrow \dots$$

$$1 + 2 = 3$$

(3)

*

$$\varnothing \text{ add } (23-2=321-21)$$

deg 1	deg 2	rels
a	x	$a=x$
b		$b=x$

$$A = \{a, b, x\} / a=b=0 = \langle x \rangle$$

$$\varnothing = \langle a, b, x \rangle / a=x=b = \langle x \rangle$$

1	2	rels
a, b	x, y	$a=x, b=y$

$$A = \langle a, b, x, y \rangle / a=b=0 \cong \langle x, y \rangle$$

$$\varnothing = \text{same.}$$

1	2	rels
a	x, y	$a=x, a=y$

$$A = \langle a, x, y \rangle / a=0 = \langle x, y \rangle \quad 2D$$

$$\varnothing = \langle a, x, y \rangle / a=x=y = \langle a \rangle \quad 1D$$

So why is $\mathbb{D}/\mathbb{R}2^c$ "flat" ???