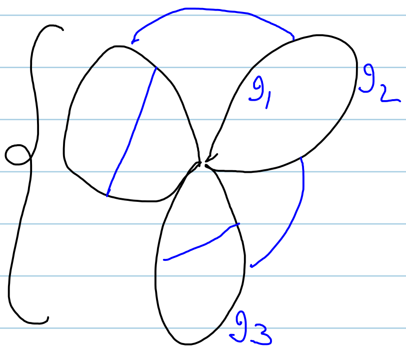
Bouquets over bouquets

July-07-11
1:07 PM

$\mathcal{A}^k_n = \Big\{$ 

$:$ k leafs, $g_i \in F_n$ $\Big\} \Big/$ 1. chords are conjugation-invariant. 2. 4T w/ 1-labeled middle part.

There exists a "composition":

$$\mathcal{A}^k_n \otimes \mathcal{A}^n_m \longrightarrow \mathcal{A}^k_m$$

There is likewise $\mathcal{A}^k_G$ for any group G.

Question. what is this the proj of? Is there a homomorphic expansion?

There is also a v-analogue, ${}^v\!\mathcal{A}^k_n$, and a composition

$$\mathcal{A}^k_n \otimes {}^v\!\mathcal{A}^n_m \longrightarrow {}^v\!\mathcal{A}^k_m$$

(But no ${}^v\!\mathcal{A}^k_n \otimes {}^v\!\mathcal{A}^n_m \to$ anything or ${}^v\!\mathcal{A}^k_n \otimes \mathcal{A}^n_m \to$ anything)

Question. what is this the proj of? Is there a homomorphic expansion?

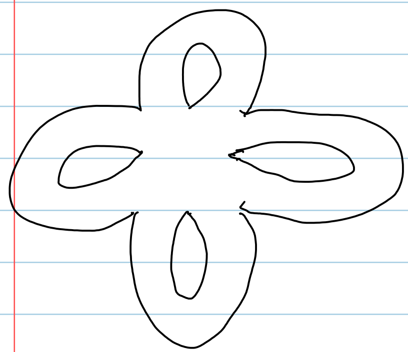
Question. Is ${}^v\!\mathcal{A}^k_n$ a subquotient of $\mathcal{A}^k_G$ for some G? For $G = F_n$?

More reasonably, ${}^v\!\mathcal{A}^k_0$ may be a quotient of

$\bigoplus_n \mathcal{A}_n^K$.

Question. How exactly are virtual knots a quotient of "knots over a bouquet"?

Question. Are there t/⊖ pictures for all of the above?



Oops, no v-knots can be drawn here.