Scratch

April-07-12
5:14 PM

$th \mapsto h h^{-1} t h$

$R = (1, x) \in F(x,y)$

$gm_1^{12} = sw_{12}^{th} // tm_1^{12} // hm_1^{12}$

$gm_1^{12}(a_1 \ldots a_n) =$

$(a_1 \cdot a_2, a_3, \ldots) /.\ x_1 \mapsto a_2 x_1 a_2^{-1}$

$/.\ x_{1,2} \to x_1$

$(a_1 \ldots a_n) * (b_1 \ldots b_n) = (a_1 a_2, \ldots a_n b_n) /.$

$x_i \mapsto b_i x_i b_i^{-1}$

$\cancel{1 \to 3}$

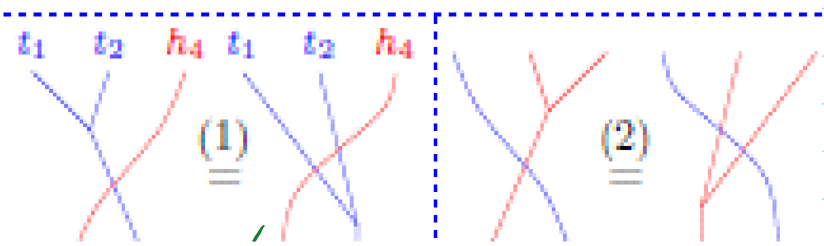
$(1, x, 1) * (1, 1, x) * (1, 1, y) =$

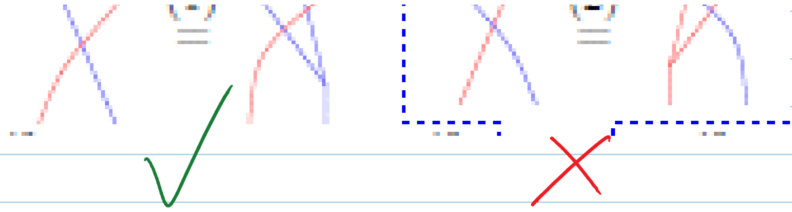
$= (1, x, x) * (1, 1, y) = (1, x, xy)$

$(1, 1, y) * (1, 1, x) * (1, x, 1) = (1, 1, yx) * (1, x, 1)$

$= (1, x, yx)\big|_{y \mapsto x y x^{-1}} =$

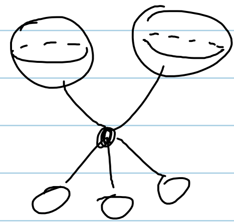
$= (1, x, xy)$ ✓





So "n words in F_m" do not form a meta-bicrossed-product. Though it seems that w-baloons & nooses do make such.

$x^{yx} = x$ $\qquad$ $x^{-1}y^{-1}xyx = x$



$x = x^{yx} = (x^{yx})^{yx^{yx}}$

w-tangles are a completion of some natural subgroup of $Aut(F_n)$, under "allowing the solutions of certain algebraic equations".

.... does this make sense?