

Correction on 240219-on_pps5gon-and-kv.

$\mathfrak{t}_3 = \text{Lie}(t^{12}, t^{13}, t^{23}) / \text{relations}$: Drinfeld-Kohno Lie alg

$$\mathbb{Q}t^{12} \oplus \text{Lie}(t^{13}, t^{23}) \cong \mathfrak{t}_3 \cong \mathbb{Q}t^{13} \oplus \text{Lie}(t^{12}, t^{23})$$

\cong
Lie(x, y)

$\mathbb{Q}(t^{13}, \dots)$

\cong
Lie(x, y)

\downarrow
 $\psi(x, y)$

\downarrow
 $\psi(x, y)$

EM 5-gon

$\psi(-x-y, y)$

grt₁

$\Rightarrow \psi(x, y)$

$$\begin{aligned} [t^{13}, t^{23}] &= [t^{13} + t^{12} + t^{23}, t^{23}] - [t^{12} + t^{23}, t^{23}] \\ &= [-t^{12} - t^{23}, t^{23}] \end{aligned}$$

AT map
 $\downarrow \cup$

$(\psi(yx), \psi(x, y))$ krV_2 $(\psi(-x-y, x), \psi(-x-y, y))$

Q.1 $\varphi \in \text{SolEMPent} \stackrel{?}{\Rightarrow} \varphi(-x-y, y) \in \text{gut}_1$

Q.2 $\varphi \in \text{SolEMPent} \stackrel{?}{\Rightarrow} \underset{nu}{v(\varphi)} := (\varphi(y, x), \varphi(x, y)) \in \text{krV}_2$

(KVI)

(KVII)

$v(\varphi) \text{ sat (KVI)} \Leftrightarrow [x, \varphi(y, x)] + [y, \varphi(x, y)] = 0$

$\text{div}(v(\varphi)) = |x \partial_x(\varphi(y, x)) + y \partial_y(\varphi(x, y))|$
 $= |x (\partial_y \varphi)(y, x) + y (\partial_x \varphi)(x, y)|$

$v(\varphi) \text{ sat (KVII)}$
 $\Leftrightarrow |xR(y, x) + yR(x, y)|$
 is Dufflo

(P3) $(\partial_y \varphi)(x, y) = 2R(x, y) - (\partial_y \varphi)(y, 0) + (\partial_y \varphi)(x+y, 0)$

$f(x+y) = | \cdot (x+y)(\partial_y \varphi)(x+y, 0) - x(\partial_y \varphi)(x, 0) - y(\partial_y \varphi)(y, 0) |$
 $+ 2 |xR(y, x) + yR(x, y)|$