# EK1 in 1

September-28-10
1:47 AM

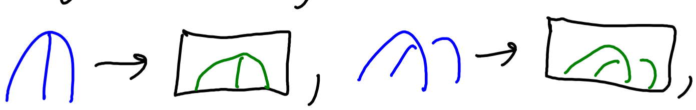
For any $v \in F(V)$, $w \in F(W)$ define $J_{VW}(v \otimes w)$ to be the composition of morphisms:

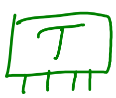
$$
\begin{aligned}
M_+ \otimes M_- \xrightarrow{i_+ \otimes i_-} (M_+ \otimes M_+) \otimes (M_- \otimes M_-) &\xrightarrow{\text{associativity morphism}} \\
(M_+ \otimes (M_+ \otimes M_-)) \otimes M_- &\xrightarrow{(1 \otimes \beta_{23}) \otimes 1} \\
(M_+ \otimes (M_- \otimes M_+)) \otimes M_- &\xrightarrow{\text{associativity morphism}} \\
(M_+ \otimes M_-) \otimes (M_+ \otimes M_-) &\xrightarrow{v \otimes w} V \otimes W, \qquad (2.1)
\end{aligned}
$$

For any $v \in F(V)$, $w \in F(W)$ define $J_{VW}(v \otimes w)$ to be the composition of morphisms:

$$
\begin{aligned}
M_- \xrightarrow{i_-} M_- \otimes M_- \xrightarrow{v \otimes w} M_+^* \otimes V \otimes M_+^* \otimes W &\xrightarrow{1 \otimes \gamma_{23} \otimes 1} \\
M_+^* \otimes M_+^* \otimes V \otimes W &\xrightarrow{i_+^* \otimes 1 \otimes 1} M_+^* \otimes V \otimes W, \qquad (8.1)
\end{aligned}
$$

Theorem. The generators of $K^{\bar{u}}$ can be written in terms of the generators of $K^u$ (I.e., given $\Phi$, can write a formula for $V$).

Sketch: 

So enough to write any . Here go: