

$$U(\mathfrak{g}) \otimes \mathbb{Q}[x] \rightarrow \mathbb{Q}[x]$$

$\mathbb{Q}[x]$ is a \mathfrak{h} -module of $U(\mathfrak{g})$:

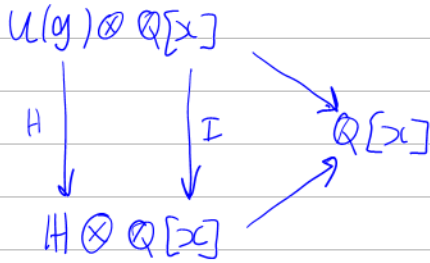
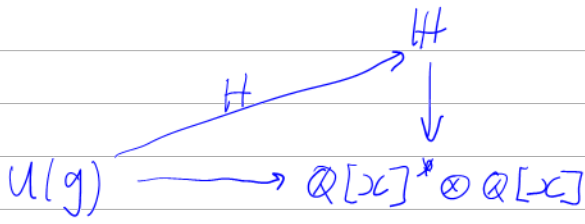
$$\mathbb{Q}[x] = U(\mathfrak{g}) / U(\mathfrak{g}) \langle y, a, b - t \rangle$$

The action

$$\mathfrak{h}_1 \otimes \mathbb{Q}[x]_2 \rightarrow \mathbb{Q}[x]$$

is

$$\sim e^{(\xi_1 + \xi_2)x} \sim \pi_1 \xi_2$$



$$\text{End}(\mathbb{Q}[x]) \rightarrow \mathfrak{H}$$

$$\xi^i x^j \rightarrow$$

$$e^{\beta P} e^{\gamma x P} \sim e^{\gamma x P} e^{\beta P} e^{\alpha x P}$$

$$g(\mathfrak{H}) = e^{\eta(tP - \epsilon x P^2)} e^{\rho(t + \epsilon x P)} e^{\alpha x P} e^{\xi x} // \sigma^1$$

at $\epsilon=0$ this is $\sigma^1(e^{\eta t P} e^{\rho t} e^{\alpha x P} e^{\xi x}) =$

$$\sigma^1(e^{\rho t} e^{\eta t P} e^{\alpha P x - \alpha} e^{\xi x}) = e^{\rho t - \alpha} e^{\eta t P} e^{(\alpha P + \xi)x}$$

