$$\underset{\omega}{\mathfrak{G}}|_{\mathfrak{U}}\mathbb{L} = \underset{\omega}{\mathfrak{G}}_1|_{\mathfrak{U}}\mathbb{L}\times\underset{\omega}{\mathfrak{G}}_{-}|_{\mathfrak{U}}\mathbb{L}$$

$$\underset{\omega}{\mathfrak{C}}|_{O}\mathbb{L} = \underset{\omega}{\mathfrak{C}}_1|_{O}\mathbb{L}\times\underset{\omega}{\mathfrak{C}}_{>}|_{O}\mathbb{L}\times\underset{\omega}{\mathfrak{C}}_{<}|_{O}\mathbb{L} \xrightarrow{\exp} \underset{\omega}{C}_1|_{O}\mathbb{L}\times\underset{\omega}{C}_{>}|_{O}\mathbb{L}\times\underset{\omega}{C}_{<}|_{O}\mathbb{L} \underset{\text{hull}}{\subset} \underset{\omega}{\mathfrak{C}}|_{O}\mathbb{L}$$

$$\underset{\omega}{\mathfrak{G}}|_{O}\mathbb{L} = \underset{\omega}{\mathfrak{G}}_1|_{O}\mathbb{L}\times\underset{\omega}{\mathfrak{G}}_{-}|_{O}\mathbb{L}$$

$$\underset{\omega}{\mathfrak{G}}_1|_{\mathfrak{U}}\mathbb{L} = \frac{\mathsf{L}\ \mathsf{l}\ \partial_{\mathsf{L}}}{\mathsf{l}\in\mathfrak{G}|\mathbb{L}} = \frac{\underbrace{\mathsf{L}\overset{*}{\flat}\mathsf{t} - \mathsf{L}\mathsf{t}^*\flat}\partial_{\mathsf{L}}}{\dot{\flat}\in\mathbb{L}} = \mathfrak{G}|\mathbb{L}$$

$$\underset{\omega}{\mathfrak{G}}_{-}|_{\mathfrak{U}}\mathbb{L} = \frac{\underbrace{\flat - \mathsf{L}\overset{*}{\flat}\mathsf{L}}\partial_{\mathsf{L}}}{\mathsf{L}\in\mathbb{L}}$$

$$\underset{\omega}{\mathfrak{G}}_{-}|_{\epsilon}\mathbb{L}\,\varkappa \text{ weights of } \rtimes S_0$$

$$S_0 \in \underset{\omega}{\mathfrak{U}}|_{\mathfrak{U}}\mathbb{L}$$

$$\underset{\omega}{\mathfrak{C}}_{>}|_{O}\mathbb{L} = \frac{\flat\partial_{\mathsf{L}}}{\flat\in\mathbb{L}} = \mathbb{L} = <\mho(\mathbb{L})>_{-2\varrho_n}$$

$$\underset{\omega}{\mathfrak{G}}_{<}|_{O}\mathbb{L} = \frac{\mathsf{L}\overset{*}{\flat}\mathsf{L}\partial_{\mathsf{L}}}{\flat\in\mathbb{L}} = \mathbb{L}^{\sharp} = <\mho(\mathbb{L})>_{2\varrho_n}$$

$$\underset{\omega}{\mathfrak{C}}^{0:\pm i}|_{O}\mathbb{L}\,\lambda \text{ weights of } i\mathsf{L}\,\partial_{\mathsf{L}}\ltimes \in \underset{\omega}{\mathfrak{G}}|_{\mathfrak{U}}\mathbb{L}$$

$$\left(\mathsf{b}_{-i}+\mathsf{b}_0+\mathsf{b}_i\right)\circledast \underset{\text{refl}}{=} -\mathsf{b}_{-i}+\mathsf{b}_0-\mathsf{b}_i$$

$$\overbrace{\mathsf{t}+\mathsf{L}\ \mathsf{l}\ +\mathsf{L}\overset{*}{\flat}\mathsf{L}}^{\circledast} \underset{\text{inv}}{=} \flat+\mathsf{L}\ \overset{*}{\mathsf{l}}\ +\mathsf{L}\mathsf{t}^*\mathsf{L}$$

$$\underbrace{a-z\overset{*}{a}z}\,\partial_z \times \underbrace{b-z\overset{*}{b}z}\,\partial_z = 2\underbrace{z\overset{*}{a}b-z\overset{*}{b}a}\,\partial_z$$

$$\underbrace{a-z\overset{*}{a}z}\,\partial_z \times \underbrace{z\overset{*}{b}c-z\overset{*}{c}b}\,\partial_z = X_{\underbrace{a\overset{*}{b}c-a\overset{*}{c}b}}$$

$$\underbrace{\overset{*}{v}w}\times\delta = \overset{*}{v}\,\underbrace{w\delta}+\underbrace{\overset{*}{v\delta}}\,w$$

$$\underbrace{u\delta - z\overbrace{u\delta}^{*}z}\,\partial_z = \underbrace{u-z\overset{*}{u}z}\,\partial_z\times\delta = u\delta - \underbrace{z\overset{*}{u}z}\delta + \underbrace{z\delta}\,\overset{*}{u}\,z + z\,\overset{*}{u}\,\underbrace{z\delta} \Longrightarrow$$

$$\underbrace{z\overset{*}{u}z}\delta = z\,\overset{*}{u}\,\underbrace{z\delta}+z\,\overbrace{u\delta}^{*}\,z+\underbrace{z\delta}\,\overset{*}{u}\,z \Longrightarrow \underbrace{u\overset{*}{v}w}\delta = u\,\overset{*}{v}\,\underbrace{w\delta}+u\,\overbrace{v\delta}^{*}\,w+\overbrace{u\delta}\,\overset{*}{v}\,w \Longrightarrow \underbrace{\overset{*}{v}w}\times\delta = \overset{*}{v}\,\underbrace{w\delta}+\overbrace{v\delta}^{*}\,w$$

$$\underbrace{\overset{*}{b}c}\times i\,\underbrace{\overset{*}{u}u} = \overset{*}{b}\,\underbrace{ic\overset{*}{u}u}+i\,\overbrace{b\overset{*}{u}u}^{*}\,c \Longrightarrow \underbrace{\overset{*}{b}c}\times\underbrace{\overset{*}{a}d} = \overset{*}{b}\,\underbrace{c\overset{*}{a}d} - \overbrace{a\overset{*}{d}b}^{*}\,c$$

$$\underbrace{z\overset{*}{b}c}\,\overset{*}{a}\,d - \underbrace{z\overset{*}{a}d}\,\overset{*}{b}\,c = z\,\overset{*}{b}\,\underbrace{c\overset{*}{a}d} - z\,\underbrace{a\overset{*}{\overset{*}{d}}b}\,c$$

$$\underbrace{z\overset{*}{a}d} \times \underbrace{z\overset{*}{b}z} = z\,\overbrace{\overset{*}{a}db}^{*}\,z$$

$$\underbrace{z\overset{*}{a}d} \times \underbrace{z\overset{*}{b}z} = \underbrace{z\overset{*}{a}d}\,\overset{*}{b}\,z + z\,\overset{*}{b}\,\underbrace{z\overset{*}{a}d} - \underbrace{z\overset{*}{b}z}\,\overset{*}{a}\,d = z\,\overbrace{\overset{*}{a}db}^{*}\,z$$

$$z = c$$

$$\mathsf{b} \bowtie \mathsf{b} = \Re \underbrace{\underbrace{\ltimes\mathsf{b}}\,\underbrace{\ltimes\mathsf{b}}} \Longrightarrow X_a \bowtie X_b = 4p\Re a \bowtie b$$

$$\text{symm } X_a \bowtie X_a = 4p\Re a \bowtie a$$

$$\text{K-inv } a = \sum_k \lambda^k e_k \Longrightarrow \text{ root deco}$$