$$\mathsf{L} \bowtie \mathsf{L}' = \mathsf{L}\, \eta^{-1}\, \mathsf{L}'^{*}$$

$$\mathsf{h} \xrightarrow[\mathsf{1}]{\mathsf{7}} G(\mathsf{L})$$

$$\overset{\mathsf{h}}{\mathsf{1}} = \overset{\mathsf{h}}{\mathsf{1}}\, \eta^{-1}\, \overset{\mathsf{h}}{\mathsf{1}}^{*} = \overset{\mathsf{h}}{\mathsf{1}}\, {}_{.}\eta^{-1}{}^{.}\, \overset{\mathsf{h}}{\mathsf{1}}^{*}$$

$$\mathsf{L} \overset{\mathsf{h}}{\bowtie} \mathsf{L}' = \left(\mathsf{L}\overset{\mathsf{h}}{\mathsf{1}}\right) \bowtie \left(\mathsf{L}'\overset{\mathsf{h}}{\mathsf{1}}\right) = \left(\mathsf{L}\overset{\mathsf{h}}{\mathsf{1}}\right) \eta^{-1} \left(\mathsf{L}'\overset{\mathsf{h}}{\mathsf{1}}\right)^{*} = \mathsf{L} \left(\overset{\mathsf{h}}{\mathsf{1}}\eta^{-1}\overset{\mathsf{h}}{\mathsf{1}}^{*}\right) \mathsf{L}'^{*} =$$

$$\mathsf{L}\ \overset{\mathsf{h}}{\mathsf{1}}\ \mathsf{L}'^{*} = \left(\mathsf{L}\overset{\mathsf{h}}{\mathsf{1}}\right) {}_{.}\eta^{-1}{}^{.} \left(\mathsf{L}'\overset{\mathsf{h}}{\mathsf{1}}\right)^{*} = \left(\mathsf{L}\mathsf{1}_{\mathsf{h}}\right) \bowtie \left(\mathsf{L}'\mathsf{1}_{\mathsf{h}}\right)$$

$$[illegible] = [illegible] = [illegible]$$

$$[illegible] \ni [illegible] \quad \text{basis}$$

$$[illegible]_j \overset{*}{v} = {}_i\eta^j = {}_i[illegible]\ \eta\ [illegible]^j = {}_i\eta^j$$

$$_i[illegible] \times {}_j[illegible] = {}_i[illegible]\ \eta\ {}_j\overset{*}{[illegible]} = {}_i[illegible]\ \eta\ [illegible]^j = {}_i\eta^j$$

$$_i[illegible] \times {}_j[illegible] = {}_i[illegible]\ [illegible]\ {}_j\overset{*}{[illegible]} = {}_i[illegible]\ [illegible]\ [illegible]^j = {}_i[illegible]^j$$

$$[illegible] \ni {}_i[illegible] = {}_i[illegible]\ [illegible] \quad \text{basis}$$

$$_i[illegible] \times {}_j[illegible] = \left({}_i[illegible]\right)\left([illegible]\,\eta\,[illegible]^*\right)\left({}_j[illegible]\right)^* = {}_i[illegible]\ \eta\ {}_j\overset{*}{[illegible]} = {}_i\eta^j$$

$$[illegible] \xrightarrow[{[illegible]}]{[illegible]} {}_m\mathbb{K}^m$$

$$[illegible] = [illegible]\ \eta\ [illegible]^*$$

$$_i[illegible] = {}_i[illegible]\ [illegible] \quad \text{basis}$$

$$_i[illegible] = {}_i[illegible]\ [illegible] = {}_i[illegible]\ [illegible]\ [illegible] = {}_i[illegible]\ [illegible] \quad \text{basis}$$

$$_i[illegible] \times {}_j[illegible] = {}_i\eta^j$$

$\cdot 0$: $\quad \mathbb{K}_{\mathbb{N}} [illegible] \ni {}_I[illegible]$ Standardbasis

$$_I[illegible]\ {}_J\overset{*}{[illegible]} = {}_I[illegible]\ [illegible]^J = {}_I\delta^J$$

$$_I[illegible] \times {}_J[illegible] = {}_I[illegible]\ \eta\ {}_J\overset{*}{[illegible]} = {}_I[illegible]\ \eta\ [illegible]^J = {}_I\eta^J$$

$\cdot 0 + :$ $$_I[illegible] \times {}_J[illegible] = \begin{cases} {}_I[illegible]\ {}_J\overset{*}{[illegible]} & = [illegible]_{IJ} \\ {}_I[illegible]\ {}_J\overset{*}{[illegible]} & = {}_I[illegible]\ [illegible]^J = {}_I[illegible]^J \end{cases}$$

$$\mathbb{K}_{\mathbb{N}} [illegible] \ni \begin{cases} [illegible]^{-1}_I & = {}_I[illegible]^{-1} \\ {}_I[illegible] & = {}_I[illegible] \end{cases} \quad \text{ONBasis}$$

$$\begin{cases} [illegible]^{-1} & [illegible] \\ = [illegible]^I\ {}_I[illegible] & = [illegible]^I\ [illegible]^{-1}_I \end{cases}$$

$$\begin{cases} [illegible]^{-1}_I\ [illegible]^J \\ = {}_I[illegible]^J \end{cases} = {}_I\delta^J$$

$$\begin{cases} {}^{\mathsf{h}^{-1}}_{I} \cdot {}^{\mathsf{h}}\!\!\times {}^{\mathsf{h}^{-1}}_{J} = \dots = {}_{I}\mathsf{l}\ \eta\ {}_{J}\overset{*}{\mathsf{l}} = {}_{IJ}\eta \\ {}_{I}\cdot\ {}^{\mathsf{h}}\!\!\times\ {}_{J}\cdot = \dots \end{cases}$$

$\cdot 1$: $\mathbb{K}_{\mathbb{N}} \triangleleft \mathsf{h} \times \mathsf{h} \ni {}_{I}\mathsf{v}_{\mathsf{h}}$ holonomic basis

$${}_{I}\mathsf{v}_{\mathsf{h}}\ {}^{\mathsf{h}}\mathsf{v}^{J} = {}_{I}\delta^{J}$$

$\cdot 1+$: $\mathbb{K}_{\mathbb{N}} \triangleleft \mathsf{h} \times \mathsf{h} \ni \begin{cases} {}^{\mathsf{h}}_{I} \\ {}_{I}\mathsf{b}_{\mathsf{h}} \end{cases}$ ONbasis

$$\begin{cases} {}^{\mathsf{h}}_{I} = {}^{\mathsf{h}^{-1}J}_{I}\ {}_{J}\mathsf{v}_{\mathsf{h}} \\ {}_{I}\mathsf{b}_{\mathsf{h}} = {}_{I}\cdot^{J}\ {}_{J}\mathsf{v}_{\mathsf{h}} \end{cases}$$

$${}_{I}\mathsf{v}_{\mathsf{h}} = \begin{cases} {}^{\mathsf{h}}_{I}{}^{J}\ {}^{\mathsf{h}}_{J} \\ {}_{I}\mathsf{l}^{J}\ {}_{J}\mathsf{b}_{\mathsf{h}} \end{cases}$$

$$\begin{cases} {}^{\mathsf{h}}_{I}\ {}^{\mathsf{h}}\cdot^{J} \\ {}_{I}\mathsf{b}_{\mathsf{h}}\ {}^{\mathsf{h}}\mathsf{q}^{J} \end{cases} = {}_{I}\delta^{J}$$

$${}_{I}\mathsf{b}_{\mathsf{h}}\ \overset{\mathsf{h}}{\times}\ {}_{J}\mathsf{b}_{\mathsf{h}} = {}_{I}\eta^{J}$$

$\cdot 01$: ${}_{I}\mathsf{v}_{\mathsf{h}} = {}_{I}\mathsf{l}\ \ \mathsf{v}_{\mathsf{h}}$

$$\mathsf{v}_{\mathsf{h}} = \mathsf{l}^{I}\ \ {}_{I}\mathsf{v}_{\mathsf{h}}$$

$\cdot_{+}0$: $\begin{cases} {}^{\mathsf{h}}_{I} = {}_{I}\mathsf{l}\ {}^{\mathsf{h}} = {}^{\mathsf{h}^{-1}}_{I}\mathsf{v}_{\mathsf{h}} \\ {}_{I}\mathsf{b}_{\mathsf{h}} = {}_{I}\mathsf{l}\ \mathsf{b}_{\mathsf{h}} = {}_{I}\cdot\ \mathsf{v}_{\mathsf{h}} \end{cases}$

$$\begin{cases} {}^{\mathsf{h}} = \mathsf{l}^{I}\ {}^{\mathsf{h}}_{I} \\ \mathsf{b}_{\mathsf{h}} = \mathsf{l}^{I}\ {}_{I}\mathsf{b}_{\mathsf{h}} = {}_{I}\cdot \end{cases}$$

$$\mathsf{v}_{\mathsf{h}} = \begin{cases} {}^{\mathsf{h}}\cdot^{I}\ {}^{\mathsf{h}}_{I} \\ \mathsf{l}^{I}\ {}_{I}\mathsf{b}_{\mathsf{h}} \end{cases}$$

$\cdot 0$: $\mathbb{K}_{\mathbb{N}} \triangleleft \mathsf{h} \ni \mathsf{l}^{J}$ Standardbasis

$${}_{I}\mathsf{l}\ \ {}_{J}\overset{*}{\mathsf{l}} = {}_{I}\mathsf{l}\ \ \mathsf{l}^{J} = {}_{I}\delta^{J}$$

$$\mathsf{l}^{I}\ \times\ \mathsf{l}^{J} = \overset{*}{\mathsf{l}}^{I}\ \ \overset{-1}{\eta}\ \ \mathsf{l}^{J} = \overset{*}{\mathsf{l}}^{I}\ \ \overset{-1}{\eta}\ \ \mathsf{l}^{J} = {}_{I}\overset{-1}{\eta}{}^{J}$$

$\cdot 0+$: $\overset{*}{\mathsf{l}}^{I}\ \underset{\mathsf{h}}{\times}\ \mathsf{l}^{J} = \begin{cases} \overset{*}{\mathsf{l}}^{I}\ {}^{\mathsf{h}}\mathsf{h}\ \mathsf{l}^{J} = {}^{\mathsf{h}}\mathsf{h}^{IJ} \\ \overset{*}{\mathsf{l}}^{I}\ \mathsf{b}_{\mathsf{h}}\ \mathsf{l}^{J} = {}_{I}\mathsf{l}\ \mathsf{b}_{\mathsf{h}}\ \mathsf{l}^{J} = {}_{I}\mathsf{b}^{J}_{\mathsf{h}} \end{cases}$

$$\mathbb{K}_{\mathbb{N}} \triangleleft \underline{\mathfrak{h}} \ni \begin{cases} {}^{\mathfrak{h}}e^{J} & = {}^{\mathfrak{h}}e_{g}\,\lrcorner \\ \theta^{J} & = \theta_{J}\,\lrcorner \end{cases} \quad \text{ONBasis}$$

$$\begin{cases} {}^{\mathfrak{h}}e & \theta \\ = \theta^{I}{}_{I}\lrcorner & = {}^{\mathfrak{h}}e^{I}{}_{I}\lrcorner \end{cases}$$

$$\begin{cases} {}^{\mathfrak{h}^{-1}}e_{I}\,{}^{\mathfrak{h}}e^{J} \\ = {}_{I}b\,\theta^{J} \end{cases} = {}_{I}\delta^{J}$$

$$\cdot 1: \quad \mathbb{K}_{\mathbb{N}} \triangleleft \underline{\mathfrak{h}} \times \mathfrak{h} \ni {}^{\mathfrak{h}}\underline{\gamma}^{J} \quad \text{holonomic basis}$$

$${}_{I}\underline{\gamma}_{\mathfrak{h}}\,{}^{\mathfrak{h}}\underline{\gamma}^{J} = {}_{I}\delta^{J}$$

$$\cdot 1+: \quad \mathbb{K}_{\mathbb{N}} \triangleleft \underline{\mathfrak{h}} \times \mathfrak{h} \ni \begin{cases} {}^{\mathfrak{h}}d^{J} \\ {}^{\mathfrak{h}}q^{J} \end{cases} \quad \text{ONbasis}$$

$$\begin{cases} {}^{\mathfrak{h}}d^{J} & = \underline{\gamma}^{I}_{\mathfrak{h}}\,{}^{\mathfrak{h}}e_{I}^{J} \\ {}^{\mathfrak{h}}q^{J} & = {}^{\mathfrak{h}}\underline{\gamma}^{I}{}_{I}\theta^{J} \end{cases}$$

$${}^{\mathfrak{h}}\underline{\gamma}^{J} = \begin{cases} {}^{\mathfrak{h}}d^{I}\,{}^{\mathfrak{h}^{-1}}e_{I}^{J} \\ {}^{\mathfrak{h}}q^{I}{}_{I}b^{J} \end{cases}$$

$$\begin{cases} {}^{\mathfrak{h}}d_{I}\,{}^{\mathfrak{h}}d^{J} \\ {}_{I}b_{\mathfrak{h}}\,{}^{\mathfrak{h}}q^{J} \end{cases} = {}_{I}\delta^{J}$$

$${}^{\mathfrak{h}}q^{I} \underset{\mathfrak{h}}{\bowtie} {}^{\mathfrak{h}}q^{J} = {}_{I}\eta^{J}$$

$$\cdot 01: \quad {}^{\mathfrak{h}}\underline{\gamma}^{I} = {}^{\mathfrak{h}}\underline{\gamma}\ \lrcorner^{I}$$

$${}^{\mathfrak{h}}\underline{\gamma} = {}^{\mathfrak{h}}\underline{\gamma}^{I}{}_{I}\lrcorner$$

$$\cdot_{+}0: \quad \begin{cases} {}^{\mathfrak{h}}d^{J} & = {}^{\mathfrak{h}}d\,\lrcorner^{J} = {}^{\mathfrak{h}}\underline{\gamma}\,{}^{\mathfrak{h}}e^{J} \\ {}^{\mathfrak{h}}q^{J} & = {}^{\mathfrak{h}}q\,\lrcorner^{J} = {}^{\mathfrak{h}}\underline{\gamma}\,\theta^{J} \end{cases}$$

$$\begin{cases} {}^{\mathfrak{h}}d & = {}^{\mathfrak{h}}d^{J}{}_{J}\lrcorner \\ {}^{\mathfrak{h}}q & = {}^{\mathfrak{h}}q^{J}{}_{J}\lrcorner \end{cases}$$

$${}^{\mathfrak{h}}\underline{\gamma} = \begin{cases} {}^{\mathfrak{h}}d^{J}\,{}^{\mathfrak{h}^{-1}}e_{J} \\ {}^{\mathfrak{h}}q^{J}{}_{J}b \end{cases}$$