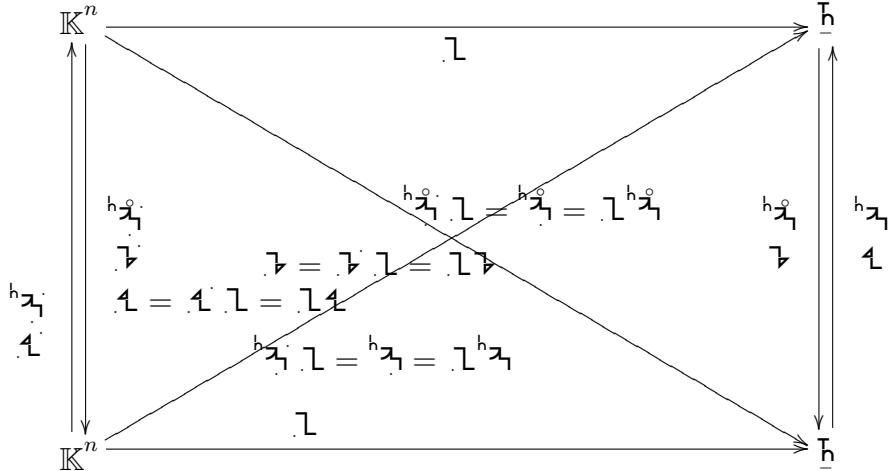


$$\mathbb{K}^n \xrightarrow{\quad L \quad} \mathbb{H}$$

$\underline{\mathfrak{h}} \ni_i \underline{\mathfrak{l}}$ Standardbasis $\underline{\mathfrak{l}}_i \times \underline{\mathfrak{l}}_j = \underline{\mathfrak{l}}_i \eta_j \underline{\mathfrak{l}}^* = \underline{\mathfrak{l}}_i \eta_j \underline{\mathfrak{l}}^j = \underline{\mathfrak{l}}_i \eta^j$

$$\not{v} = \underbrace{\not{v}_\mu}_{\not{l}} \not{l} : \quad_\mu \delta^\nu = {}_\mu \not{l} \not{l}^\nu$$

$$\mathfrak{L} = \underbrace{\mathfrak{L} \mathfrak{L}}_{\mathfrak{L}} \mathfrak{L} : {}_i \delta^j = {}_i \mathfrak{L} {}_j \mathfrak{L}^* = {}_i \mathfrak{L} \mathfrak{L}^j$$



$$i \mathbb{L} \star_j \mathbb{L} = \begin{cases} i \mathbb{L}^h \star_j \mathbb{L}^* & = \mathbb{L}^h \\ i \mathbb{L}^h \star_j \mathbb{L}^* & = i \mathbb{L}^h \mathbb{L}^j = i \mathbb{L}^j \end{cases}$$

$$\bar{h} \ni \begin{cases} h_{\overline{i}} \\ i \end{cases} = \begin{cases} h_{\overline{i}} \\ i \end{cases} \text{ ONBasis } \begin{cases} h_{\overline{i}} \\ i \end{cases} = \begin{cases} h_{\overline{i}} \\ i \end{cases}$$

$$\left\{ \begin{array}{l} h_i^{\circ} \cancel{h_j} = h_i^{\circ} h_j^* = h_i^{\circ} \underbrace{h_j \eta}_{\mu} h_{\mu}^* = h_i^{\circ} \underbrace{h_j}_{i} \eta \overbrace{h_{\mu}^* h_j}^* \\ h_i^{\circ} \cancel{h_j} = h_i^{\circ} \cancel{h_j} = h_i^{\circ} \cancel{h_j} \eta^* = h_i^{\circ} \cancel{h_j} \overbrace{\eta^* h_j}^* \end{array} \right.$$

$$\mathbf{L} = \begin{cases} \mathbf{L}^h & h \\ \mathbf{L}^i & i \end{cases} \quad : \quad {}_i\delta^j = \begin{cases} \mathbf{L}^h & h \\ \mathbf{L}^i & i \end{cases}^j$$

$$\gamma = \begin{cases} \begin{array}{c} \text{h} \\ \text{L} \\ \text{L} \end{array} & : \quad {}_\mu \delta^\nu = \begin{cases} \begin{array}{c} \text{h} \\ \text{h} \\ \text{L} \end{array} & \text{h} \\ \text{L} & \text{h} \\ \text{L} & \text{L} \end{cases} \end{cases}$$

$$L = \begin{cases} h \cdot \overbrace{A}^h & = \underbrace{h \cdot A}_h \\ \overbrace{A}^h & = h \cdot A \end{cases} \quad i \cdot L = \begin{cases} h \cdot \lambda \cdot \overbrace{A}^h & = \overbrace{h \cdot A}^h \\ \overbrace{A}^{\lambda} & = h \cdot A \end{cases}$$

$$\underline{h} \cdot \underline{l} = \begin{cases} \underline{h}^{\mu} \underline{l}^{\mu} & = \underline{h}^{\mu} \underline{l}^{\mu} \\ \underline{h}^{\lambda} \underline{l}^{\lambda} & = \underline{h}^{\lambda} \underline{l}^{\lambda} \end{cases} \quad \underline{h} \cdot \underline{m} = \begin{cases} h_{\mu}^{\mu} h_{\lambda}^{\lambda} & = h_{\mu}^{\mu} h_{\lambda}^{\lambda} \\ h_{\mu}^{\lambda} h_{\lambda}^{\mu} & = h_{\mu}^{\lambda} h_{\lambda}^{\mu} \end{cases}$$

$$\begin{cases} h_i^{\mu} & = h_i^{\mu} l^{\mu} = h_i^{\mu} l^{\mu} \\ h_i^{\lambda} & = h_i^{\lambda} l^{\lambda} = h_i^{\lambda} l^{\lambda} \end{cases} \quad \begin{cases} h_i^{\mu} & = l_i^{\mu} h_{\mu}^{\lambda} = h_i^{\mu} h_{\lambda}^{\lambda} \\ h_i^{\lambda} & = l_i^{\lambda} h_{\lambda}^{\mu} = h_i^{\lambda} h_{\mu}^{\mu} \end{cases}$$

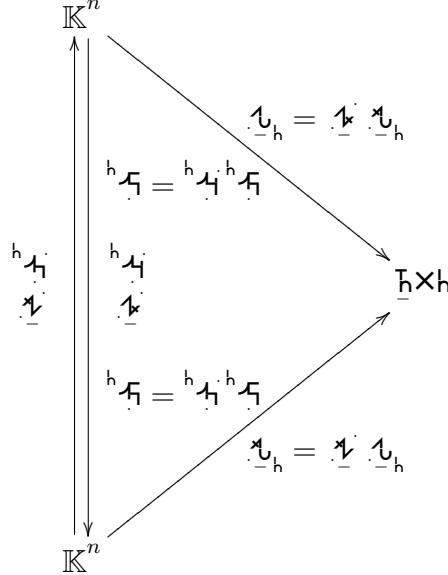
$$\begin{cases} h_i^{\mu} & = h_i^{\mu} l^{\mu} = h_i^{\mu} l^{\mu} \\ h_i^{\lambda} & = h_i^{\lambda} l^{\lambda} = h_i^{\lambda} l^{\lambda} \end{cases} \quad \begin{cases} h_{\mu}^{\mu} & = h_{\mu}^{\mu} l^{\mu} = h_{\mu}^{\mu} l^{\mu} \\ h_{\mu}^{\lambda} & = h_{\mu}^{\lambda} l^{\lambda} = h_{\mu}^{\lambda} l^{\lambda} \end{cases}$$

$$\begin{cases} h_i^{\mu} & = h_i^{\mu} l^{\mu} = h_i^{\mu} l^{\mu} \\ h_i^{\lambda} & = h_i^{\lambda} l^{\lambda} = h_i^{\lambda} l^{\lambda} \end{cases} \quad \begin{cases} h_i^{\nu} & = l_i^{\nu} h_{\nu}^{\mu} = h_i^{\nu} h_{\mu}^{\mu} \\ h_i^{\mu} & = l_i^{\mu} h_{\mu}^{\lambda} = h_i^{\mu} h_{\lambda}^{\lambda} \end{cases}$$

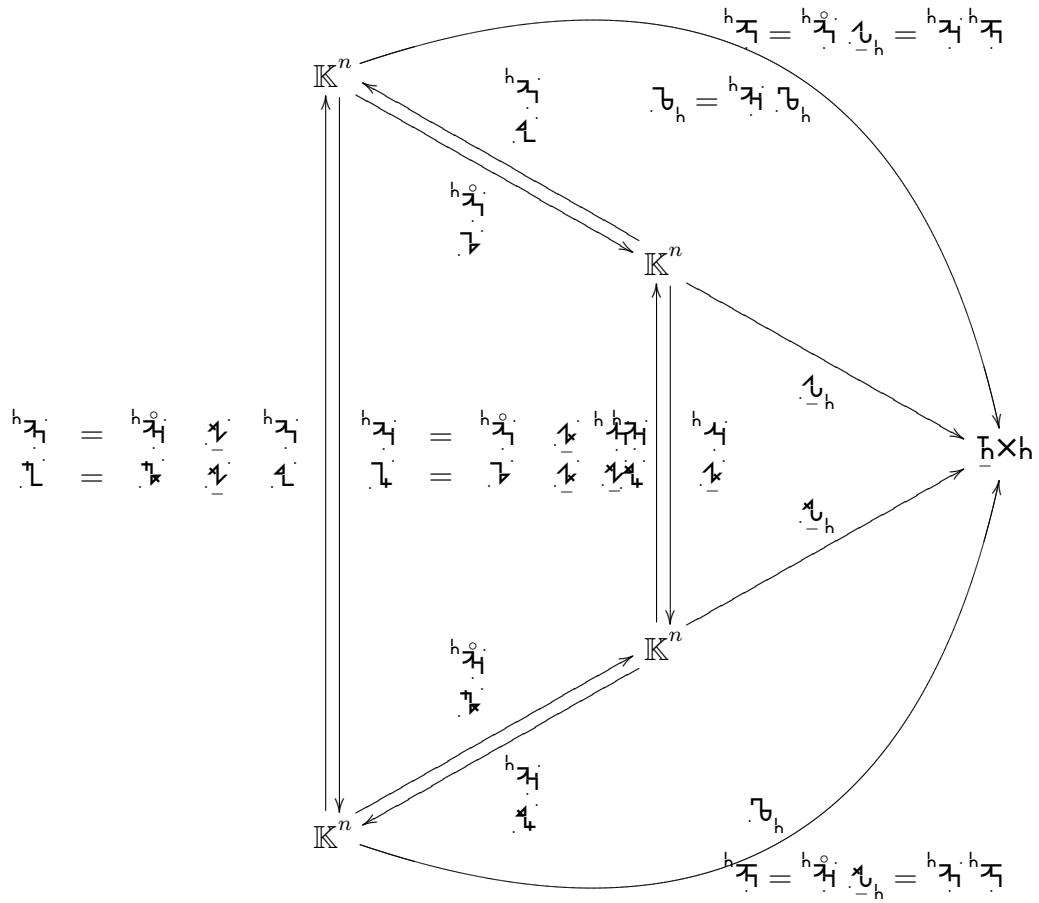
$$\begin{cases} h_i^{\mu} & = h_i^{\mu} l^{\mu} = h_i^{\mu} l^{\mu} \\ h_i^{\lambda} & = h_i^{\lambda} l^{\lambda} = h_i^{\lambda} l^{\lambda} \end{cases} \quad \begin{cases} h_{\mu}^{\nu} & = l_{\mu}^{\nu} h_{\nu}^{\mu} = h_{\mu}^{\nu} h_{\mu}^{\mu} \\ h_{\mu}^{\mu} & = l_{\mu}^{\mu} h_{\mu}^{\lambda} = h_{\mu}^{\mu} h_{\lambda}^{\lambda} \end{cases}$$

$$\begin{cases} h_i^{\mu} & = h_i^{\mu} l^{\mu} = h_i^{\mu} l^{\mu} \\ h_i^{\lambda} & = h_i^{\lambda} l^{\lambda} = h_i^{\lambda} l^{\lambda} \end{cases} \quad \begin{cases} h_{\mu}^j & = l_{\mu}^j h_{\mu}^{\mu} = h_{\mu}^j h_{\mu}^{\mu} \\ h_{\mu}^{\mu} & = l_{\mu}^{\mu} h_{\mu}^{\lambda} = h_{\mu}^{\mu} h_{\lambda}^{\lambda} \end{cases}$$

$$\mathbb{K}^n \xrightarrow[\underline{h}_z]{} \underline{h}$$



$$\underline{h} \times \underline{h} \ni \underline{\lambda}_h \text{ holonomic basis } \underline{h} = \underline{\lambda}_h \underline{\gamma}^h : \quad {}_\mu \delta^\nu = {}_\mu \underline{\lambda}_h \underline{\gamma}^\nu$$



$$\underline{h} \times h \equiv \begin{cases} {}^h \cancel{\underline{h}} \\ {}_i \underline{h} \end{cases} \quad \text{ON basis } {}_i \underline{b}_h \times {}^h \cancel{\underline{b}}_h = {}_i b^j$$

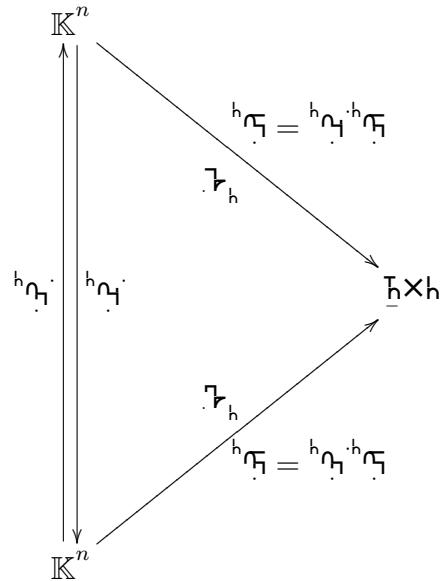
$$\mathbf{L} = \begin{cases} \begin{array}{c} \text{h} \\ \text{L} \end{array} & \text{h} \\ \begin{array}{c} \text{L} \\ \text{h} \end{array} & \text{h} \end{cases} \quad : \quad {}_i\delta^j = \begin{cases} \begin{array}{c} \text{h} \\ \text{L} \end{array} & \text{h} \\ \begin{array}{c} \text{L} \\ \text{h} \end{array} & \text{h} \end{cases} \begin{array}{c} \text{h} \\ \text{L} \end{array} \quad \begin{array}{c} \text{j} \\ \text{j} \end{array}$$

$$\begin{cases} \underline{\lambda}^{\cdot h} \overline{\lambda} = \underline{\lambda}^{\cdot h} \circ \underline{\lambda}_h \\ \underline{\lambda} \cdot \underline{\lambda}_h = \underline{\lambda} \cdot \underline{\lambda}_h \end{cases} \quad \begin{cases} {}^h \overline{\lambda}_i = {}^h \overline{\lambda}_i \lambda_h \\ {}_i \overline{\lambda}_h = {}_i \overline{\lambda}_h \lambda_h \end{cases}$$

$$\mathbf{U}_h = \begin{cases} \mathbf{U}_h & \\ \mathbf{U}_h & \end{cases} : \quad \mathbf{U}_h = \begin{cases} \mathbf{U}_h & \\ \mathbf{U}_h & \end{cases}$$

$$\left\{ \begin{array}{l} \text{L}^{\text{h}} \bar{\gamma} \\ \text{L}^{\text{h}} \bar{\gamma} \end{array} \right. = \underbrace{\text{L}^{\text{h}} \bar{\gamma}}_{\text{L}^{\text{h}} \bar{\gamma}} \quad \left\{ \begin{array}{l} \text{h}^{\text{o}} \nu \\ \text{i}^{\text{o}} \nu \end{array} \right. = \text{h}^{\text{o}} \bar{\gamma} \quad \left\{ \begin{array}{l} \text{h}^{\text{o}} \nu \\ \text{i}^{\text{o}} \nu \end{array} \right. = \text{h}^{\text{o}} \bar{\gamma}$$

$$\begin{cases} \underline{\mathbf{1}}^h \underline{\mathbf{1}} = \underbrace{\underline{\mathbf{1}} \underline{\mathbf{U}}_h}_{\underline{\mathbf{1}}}^h \underline{\mathbf{1}} \\ \underline{\mathbf{1}} \underline{\mathbf{A}} = \underbrace{\underline{\mathbf{1}} \underline{\mathbf{U}}_h}_{\underline{\mathbf{1}}}^h \underline{\mathbf{A}} \end{cases} \quad \begin{cases} {}^h \underline{\mathbf{A}}^j = {}^h \underline{\mathbf{U}}_h \underline{\mathbf{A}}^j \\ {}^h \underline{\mathbf{A}}^j = {}^h \underline{\mathbf{U}}_h \underline{\mathbf{A}}^j \end{cases}$$



$$\underline{\mathbf{r}}_h = \begin{bmatrix} {}^1 \underline{\mathbf{r}}_h \\ \vdots \\ {}^n \underline{\mathbf{r}}_h \end{bmatrix} \quad \text{Basis } \underline{\mathbf{h}} \times \underline{\mathbf{h}} \ni {}^i \underline{\mathbf{r}}_h = {}^i \underline{\mathbf{l}} \cdot {}^i \underline{\mathbf{r}}_h$$