

$$\mathbf{v} = \begin{bmatrix} v^1 & \dots & v^n \end{bmatrix} \in \mathbb{K}^n \times \mathbb{K}^n$$

$$\begin{array}{ccc} & \mathbb{K}^n & \\ \uparrow & & \downarrow \\ \mathbb{K}^n & & \mathbb{K}^n \end{array}$$

$$\mathbb{H} \xrightarrow[\cdot]{\cdot} {}^{\mathbb{C}}_n\mathbb{K}^n$$

$$\mathbf{L} = \left\{ \underbrace{\mathbf{L}_{\mathbf{A}_1}^{-1} \mathbf{h}_{\mathbf{A}_1}}_{\mathbf{L}_{\mathbf{A}_1}} : \mathbf{L}_{\mathbf{A}_2}^j = \left\{ \mathbf{h}_{\mathbf{A}_2}^{-1\mu} \mathbf{h}_{\mathbf{A}_2}^j \right\}_{\mu=1}^{\mu=J} \right.$$

$$A = \left\{ \underbrace{A_1 A_2 \dots A_h}_{A_1 A_2 \dots A_h} : \mu \delta^\nu = \left\{ \underbrace{A_1 A_2 \dots A_h}_{A_1 A_2 \dots A_h} \right\} \right\}$$

$$\mathbb{K}^n \xrightarrow[\begin{smallmatrix} {}^h\mathbb{A} = \mathbb{A} \cdot \eta \cdot \mathbb{A}^* \\ {}^h\mathbb{A} = \mathbb{A} \cdot \eta \cdot \mathbb{A}^* \end{smallmatrix}]{\begin{smallmatrix} {}^h\mathbb{A} = \mathbb{A} \cdot \eta \cdot \mathbb{A}^* \\ {}^h\mathbb{A} = \mathbb{A} \cdot \eta \cdot \mathbb{A}^* \end{smallmatrix}} {}^{p,q}\mathbb{K}^{p,q}$$

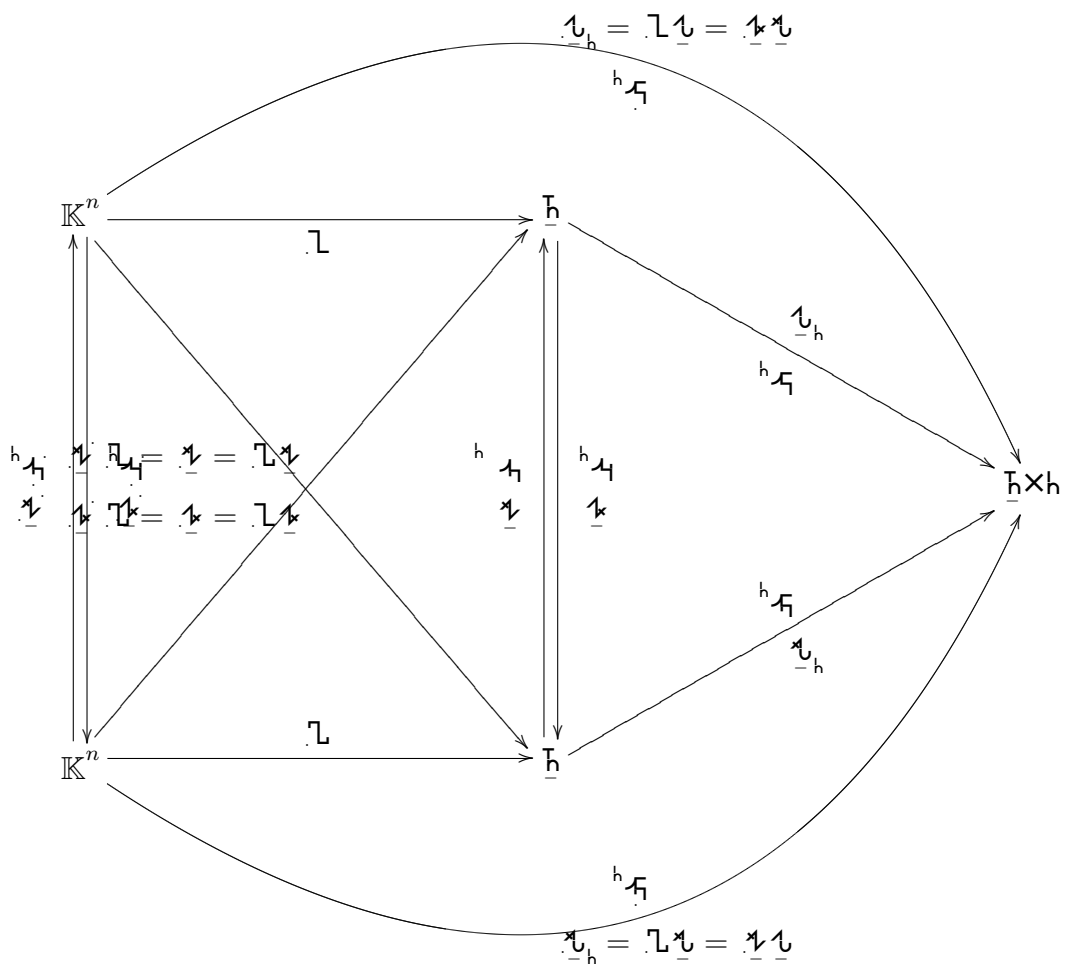
$$\begin{cases} \mathbf{h}_{l \circ n}^{\mathbf{a}_l} = \underbrace{\mathbf{h}_{\mu}^{\mathbf{a}_l} \eta_{ij}^{\mathbf{a}_l^*}}_{\mu}^{\nu} = \mathbf{h}_{\mu}^{\mathbf{a}_l^i} \eta_{ij}^{\mathbf{a}_l^* j} = \mathbf{h}_{\mu}^{\mathbf{a}_l^i} \eta_{ij}^{\mathbf{a}_l^j} \\ \mathbf{h}_{\mu}^{\mathbf{a}_l^{\nu}} = \mathbf{h}_{\mu}^{\mathbf{a}_l^i} \eta_{ij}^{\mathbf{a}_l^* j} \end{cases}$$

$${}^h\mathcal{A}_{\cdot\cdot} = {}^h\mathcal{A}_{\cdot\cdot} \eta {}^h\mathcal{A}_{\cdot\cdot}^*$$

$$\begin{matrix} l_n \\ \text{ } \\ l \circ n \end{matrix}$$

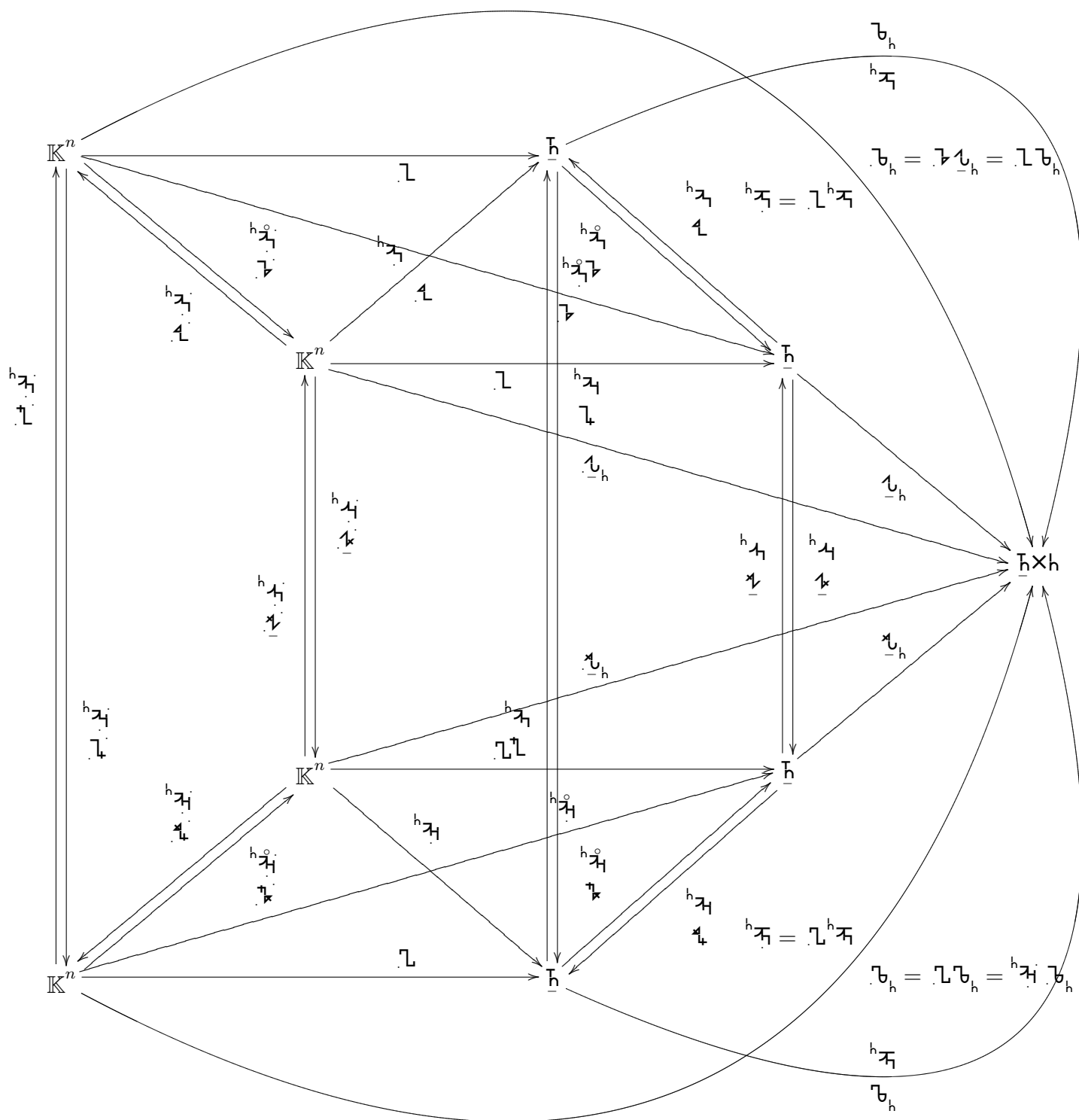
$$\mathbf{l}' \cdot \mathbf{l} = \mathbf{l}' \cdot \eta \mathbf{l}^* = \mathbf{l}'^i \eta_{ij} \mathbf{l}^j$$

[illegible]



$$\gamma \gamma_h = \gamma_h \gamma: \quad \gamma_h = \gamma_h \gamma_h$$

$$\gamma_h = \gamma_h \gamma: \quad \gamma_h = \gamma_h \gamma_h$$



$$\mathbb{L} = \begin{cases} \mathbb{L}^h \mathbb{T}^h \mathbb{Z} \\ \mathbb{L}^h \mathbb{T}_h^h \mathbb{Z} \end{cases} \quad \mathbb{Z} = \begin{cases} \mathbb{Z}^h \mathbb{T}^h \mathbb{Z} \\ \mathbb{Z}^h \mathbb{T}_h^h \mathbb{Z} \end{cases}$$

$$\begin{cases} \mathbb{L}^{\mathbf{h}} \mathcal{T} &= \mathbb{L}^{\mathbf{h}} \mathbb{L}^{\mathbf{h}} \mathcal{T} = \mathbb{L}^{\mathbf{h} \circ \mathbf{h}} \mathbb{L}_{\mathbf{h}} \left\{ \begin{array}{l} \mathcal{T} \\ \mathcal{T}_{\mathbf{h}} \end{array} \right. = \mathbb{L}^{\mathbf{h}} \mathcal{T} = \mathbb{L}^{\mathbf{h} \circ \mathbf{h}} \mathbb{L}_{\mathbf{h}} \\ \mathbb{L}^{\mathbf{h}} \mathcal{T}_{\mathbf{h}} &= \mathbb{L}^{\mathbf{h}} \mathbb{L}^{\mathbf{h}} \mathcal{T}_{\mathbf{h}} = \mathbb{L}^{\mathbf{h} \circ \mathbf{h}} \mathbb{L}_{\mathbf{h}} \left\{ \begin{array}{l} \mathcal{T} \\ \mathcal{T}_{\mathbf{h}} \end{array} \right. = \mathbb{L}^{\mathbf{h}} \mathcal{T}_{\mathbf{h}} = \mathbb{L}^{\mathbf{h} \circ \mathbf{h}} \mathbb{L}_{\mathbf{h}} \end{cases}$$

$$\mu \cdot \mathcal{U}_h = \begin{cases} \mu \cdot \mathcal{U}_h^{\mu} & \text{if } \mu \in \mathcal{U}_h \\ \mu \cdot \mathcal{U}_h^{\mu} & \text{if } \mu \in \mathcal{U}_h \end{cases} \quad \mu \cdot \mathcal{U}_h = \begin{cases} \mu \cdot \mathcal{U}_h^{\mu} & \text{if } \mu \in \mathcal{U}_h \\ \mu \cdot \mathcal{U}_h^{\mu} & \text{if } \mu \in \mathcal{U}_h \end{cases}$$

$$\begin{cases} \begin{smallmatrix} \textcircled{h} & \textcircled{i} \\ \textcircled{1} & \textcircled{2} \end{smallmatrix} = \underbrace{\begin{smallmatrix} \textcircled{h} & \textcircled{1} \\ \textcircled{2} & \textcircled{h} \end{smallmatrix}}_{\textcircled{h}} \textcircled{1} \textcircled{2} = \begin{smallmatrix} \textcircled{h} & \textcircled{i} \\ \textcircled{1} & \textcircled{2} \end{smallmatrix} = \begin{smallmatrix} \textcircled{h} & \textcircled{1} \\ \textcircled{2} & \textcircled{h} \end{smallmatrix} \textcircled{1} \textcircled{2} \\ \begin{smallmatrix} \textcircled{h} & \textcircled{1} \\ \textcircled{2} & \textcircled{h} \end{smallmatrix} = \underbrace{\begin{smallmatrix} \textcircled{h} & \textcircled{2} \\ \textcircled{1} & \textcircled{h} \end{smallmatrix}}_{\textcircled{h}} \textcircled{1} \textcircled{2} = \begin{smallmatrix} \textcircled{h} & \textcircled{1} \\ \textcircled{2} & \textcircled{h} \end{smallmatrix} = \begin{smallmatrix} \textcircled{h} & \textcircled{2} \\ \textcircled{1} & \textcircled{h} \end{smallmatrix} \textcircled{1} \textcircled{2} \end{cases}$$

$$\begin{cases} \begin{array}{c} \vdots \\ \vdots \end{array} \begin{array}{c} h_1 \\ 1 \end{array} = \begin{array}{c} \vdots \\ \vdots \end{array} \begin{array}{c} 1 \\ \vdots \end{array} \begin{array}{c} h_1 \\ 1 \end{array} \end{cases} \begin{cases} h_1 \\ \mu \end{array} = \begin{array}{c} 1 \\ \mu \end{array} \begin{array}{c} h_1 \\ 1 \end{array} \begin{array}{c} h_1 \\ \mu \end{array}$$

