$$\mathbb{K}^n \underset{\infty}{\rtimes} \mathbb{K}^n \ni \cdot = \cdot^1 \cdots \cdot^n$$

$$\underbrace{\cdot \times \cdot}_{z} = \cdot_z \cdot_z - \cdot_z \cdot_z$$

$$\underbrace{\cdot \times \cdot} \times \cdot + \underbrace{\cdot \times \cdot} \times \cdot + \underbrace{\cdot \times \cdot} \times \cdot = 0$$

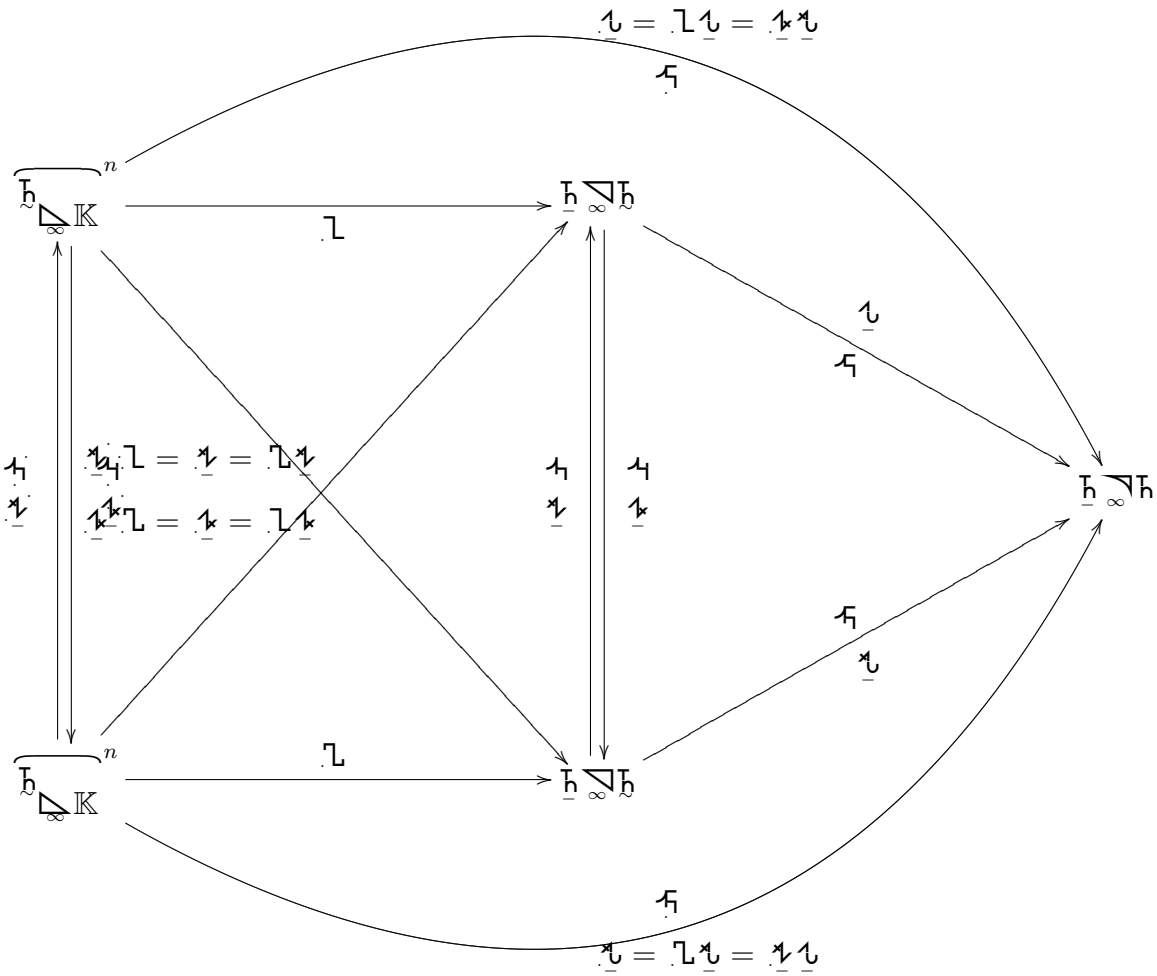
$$4\,\mathrm{LHS}_z = \sum \underbrace{\cdot \times \cdot} \times \cdot_z = \underbrace{\cdot \times \cdot}_{z} \cdot_z - \cdot_z \underbrace{\cdot \times \cdot}_{z} = \underbrace{\cdot_z \cdot_z - \cdot_z \cdot_z} \cdot_z - \cdot_z \underbrace{\cdot \cdot - \cdot \cdot}_{z}$$

$$= \cdot_z \cdot_z \cdot_z - \cdot_z \cdot_z \cdot_z - \cdot_z \cdot_z \cdot_z - \underbrace{\cdot_z \cdot_z} \cdot_z + \cdot_z \cdot_z \cdot_z + \underbrace{\cdot_z \cdot_z} \cdot_z = 0$$

$$\begin{array}{ccc} \mathbb{K}^n \underset{\infty}{\rtimes} \mathbb{K}^n & & \ni \cdot = \cdot^1 \cdots \cdot^n \\ {\scriptstyle \cdot^{-1}_{\cdot} = \cdot_{\cdot}} \Big\| \Big\uparrow {\scriptstyle \cdot^{\cdot}_{\cdot} = \cdot^{\cdot}_{\cdot}} & & \\ \mathbb{K}^n \underset{\infty}{\rtimes} \mathbb{K}^n & & \ni \cdot = \cdot^1 \cdots \cdot^n \end{array}$$

$$\cdot^{\cdot} = \begin{cases} \underbrace{\cdot^{-1}_{\cdot}}\, \cdot^{\cdot}_{\cdot} \\ \underbrace{\cdot\, \cdot}\, \cdot \end{cases} \quad : \quad {}_i\delta^j = \begin{cases} \cdot^{-1}_{i}{}^{\lambda}\, \cdot^{j}_{\lambda} \\ {}_i\cdot^{\lambda}\, {}_{\lambda}\cdot^{j} \end{cases}$$

$$\cdot^{\cdot} = \begin{cases} \underbrace{\cdot\, \cdot^{\cdot}_{\cdot}}\, \cdot^{-1}_{\cdot} \\ \underbrace{\cdot\, \cdot}\, \cdot \end{cases} \quad : \quad {}_\mu\delta^\nu = \begin{cases} \cdot^{k}_{\mu}\, \cdot^{-1\nu}_{k} \\ {}_\mu\cdot^{k}\, {}_{k}\cdot^{\nu} \end{cases}$$



$$\underline{\mathfrak{h}}\,\underline{\mathfrak{l}} = \underbrace{\underline{\mathfrak{h}}\,\underline{\mathfrak{l}}}\,\underline{\mathfrak{l}}: \quad {}_{\mu}\underline{\mathfrak{l}} = {}_{\mu}\underline{\mathfrak{l}}\,\underline{\mathfrak{l}}$$

$$\underline{\mathfrak{h}}\,\underline{\mathfrak{l}} = \underbrace{\underline{\mathfrak{h}}\,\underline{\mathfrak{l}}}\,\underline{\mathfrak{l}}: \quad {}_{\mu}\underline{\mathfrak{l}} = {}_{\mu}\underline{\mathfrak{l}}\,\underline{\mathfrak{l}}$$

$$\begin{cases} x^{ac} &= \underbrace{x^{bc}}_{} = x^{\bar{c}\bar{b}} \\ x^{ad} &= \underbrace{x^{bd}}_{} = x^{\bar{d}\bar{b}} \end{cases} \quad \begin{cases} {}_{i}x^{c} &= {}_{i}x^{bc} = {}_{i}x^{\bar{b}\bar{c}} \\ {}_{i}x^{d} &= {}_{i}x^{bd} = {}_{i}x^{\bar{b}\bar{d}} \end{cases}$$

$$x^{\bar{a}} = \begin{cases} \underbrace{x^{ac}}_{} \\ \underbrace{x^{ad}}_{} \end{cases} \quad : \quad {}_{\mu}x^{\bar{a}} = \begin{cases} {}_{\mu}x^{ac} \\ {}_{\mu}x^{ad} \end{cases}$$

$$\begin{cases} x^{ac} &= \underbrace{x^{ab}}_{} x^{\bar{b}c} \\ x^{ad} &= \underbrace{x^{ab}}_{} x^{\bar{b}d} \end{cases} \quad \begin{cases} {}_{i}x^{c} &= {}_{i}x^{\bar{b}c} \\ {}_{i}x^{d} &= {}_{i}x^{\bar{b}d} \end{cases}$$

$$\begin{cases} x^{ac} &= x^{\bar{a}}{}_{\bar{a}}x^{ac} \\ x^{ad} &= x^{\bar{a}}{}_{\bar{a}}x^{ad} \end{cases} \quad \begin{cases} {}_{\mu}x^{c} &= {}_{\mu}x^{\bar{a}}{}_{\bar{a}}x^{ac} \\ {}_{\mu}x^{d} &= {}_{\mu}x^{\bar{a}}{}_{\bar{a}}x^{ad} \end{cases}$$