

$$\begin{array}{c} \mathbb{h} \triangleleft \mathbb{C} \\ \leftarrow \quad \mathbb{L} \quad \longrightarrow \\ n|n \mathbb{C} \end{array}$$

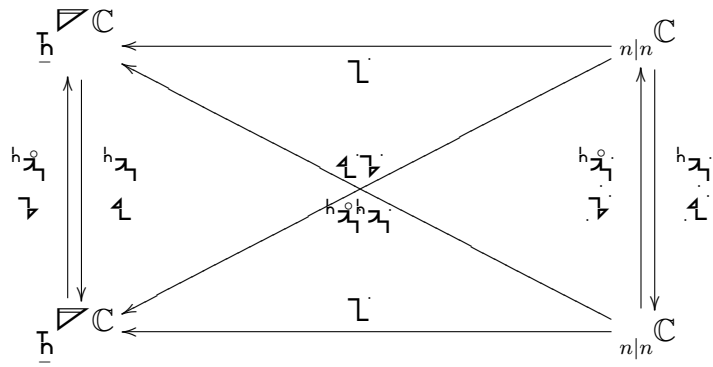
$\mathbb{h} \triangleleft \mathbb{C} \ni \mathbb{L}^j$ dual standard basis

$$\mathbb{L}^i \times \mathbb{L}^j = \mathbb{L}^i \overset{\circ}{\eta} \mathbb{L}^j = \underset{i}{\mathbb{L}} \overset{\circ}{\eta} \mathbb{L}^j = \eta^{ij}$$

$$\mathbb{A} = \mathbb{L} \quad \underbrace{\mathbb{L} \mathbb{A}}: \quad \mu \delta^\nu = \underset{\mu}{\mathbb{L}} \mathbb{L}^\nu$$

$$\mathbb{A} = \mathbb{L} \quad \underbrace{\mathbb{L} \mathbb{A}}: \quad \delta^j = \mathbb{L}^i \mathbb{L}^j = \underset{i}{\mathbb{L}} \mathbb{L}^j$$

$$\mathbb{L}^i = \underset{i}{\mathbb{L}}$$



$$\mathbb{L}^i \times_h \mathbb{L}^j = \begin{cases} \mathbb{L}^i \overset{h}{\eta} \mathbb{L}^j = \overset{h}{\eta}^{ij} \\ \mathbb{L}^i \underset{h}{\eta} \mathbb{L}^j = \underset{i}{\mathbb{L}} \underset{h}{\eta} \mathbb{L}^j = \underset{i}{\mathbb{L}} \eta^j \end{cases}$$

$$\mathbb{h} \triangleleft \mathbb{C} \ni \begin{cases} \overset{h}{\mathbb{L}}^j = \overset{h}{\mathbb{L}}^j \mathbb{L}^j \\ \underset{h}{\mathbb{L}}^j = \underset{h}{\mathbb{L}} \mathbb{L}^j \end{cases} \text{ dual ONBasis}$$

$$\begin{cases} \overset{h}{\mathbb{L}}^j = \overset{h}{\mathbb{L}}^j \mathbb{L}^j \\ \underset{h}{\mathbb{L}}^j = \underset{h}{\mathbb{L}} \mathbb{L}^j \end{cases}$$

$$\begin{cases} \overset{h}{\mathbb{L}}^i \times_h \overset{h}{\mathbb{L}}^j = \overset{h}{\mathbb{L}}^i \overset{h}{\eta} \overset{h}{\mathbb{L}}^j = \overset{h}{\mathbb{L}}^i \underbrace{\overset{h}{\eta} \overset{h}{\mathbb{L}}^j}_{\overset{h}{\mathbb{L}}^j} = \underbrace{\overset{h}{\mathbb{L}}^i \overset{h}{\mathbb{L}}^j}_{\overset{h}{\mathbb{L}}^j} = \overset{h}{\mathbb{L}}^i \overset{h}{\eta} \overset{h}{\mathbb{L}}^j = \overset{h}{\mathbb{L}}^i \overset{h}{\eta} \overset{h}{\mathbb{L}}^j = \overset{h}{\mathbb{L}}^i \overset{h}{\eta} \overset{h}{\mathbb{L}}^j = \overset{h}{\mathbb{L}}^i \overset{h}{\eta} \overset{h}{\mathbb{L}}^j \\ \underset{h}{\mathbb{L}}^i \times_h \underset{h}{\mathbb{L}}^j = \underset{h}{\mathbb{L}}^i \underset{h}{\eta} \underset{h}{\mathbb{L}}^j = \underset{h}{\mathbb{L}}^i \underbrace{\underset{h}{\eta} \underset{h}{\mathbb{L}}^j}_{\underset{h}{\mathbb{L}}^j} = \underbrace{\underset{h}{\mathbb{L}}^i \underset{h}{\mathbb{L}}^j}_{\underset{h}{\mathbb{L}}^j} = \underset{h}{\mathbb{L}}^i \underset{h}{\eta} \underset{h}{\mathbb{L}}^j = \underset{h}{\mathbb{L}}^i \underset{h}{\eta} \underset{h}{\mathbb{L}}^j = \underset{h}{\mathbb{L}}^i \underset{h}{\eta} \underset{h}{\mathbb{L}}^j = \underset{h}{\mathbb{L}}^i \underset{h}{\eta} \underset{h}{\mathbb{L}}^j \end{cases}$$

$$\mathbb{A} \times_h \mathbb{A} = \mathbb{L} \mathbb{A} \times \mathbb{L} \mathbb{A} = \mathbb{L} \mathbb{A} \overset{\circ}{\eta} \mathbb{L} \mathbb{A} = \mathbb{A} \overset{\circ}{\eta} \mathbb{L} \mathbb{A} = \mathbb{A} \underset{h}{\eta} \mathbb{A}$$

$$\mathbb{L}_h = \overset{h}{\mathbb{L}}^i \overset{h}{\eta} \overset{h}{\mathbb{L}}^j = \overset{h}{\mathbb{L}}^i \overset{h}{\eta}^{ij} \overset{h}{\mathbb{L}}^j$$

$$\gamma = \begin{cases} h^{\alpha} h^{\beta} \gamma \\ \beta \alpha \gamma \end{cases} : \delta^j = \begin{cases} h^{\alpha} h^{\beta} \delta^j \\ \beta \alpha \delta^j \end{cases}$$

$$\mu = \begin{cases} h^{\alpha} h^{\beta} \mu \\ \beta \alpha \mu \end{cases} : \delta^{\nu} = \begin{cases} h^{\alpha} h^{\beta} \delta^{\nu} \\ \beta \alpha \delta^{\nu} \end{cases}$$

$$\tau \gamma = \begin{cases} h^{\alpha} h^{\beta} \gamma = h^{\alpha} h^{\beta} \gamma \\ \beta \alpha \gamma = \beta \alpha \gamma \end{cases}$$

$$\tau^j = \begin{cases} h^{\alpha} h^{\beta} \delta^j = h^{\alpha} h^{\beta} \delta^j \\ \beta \alpha \delta^j = \beta \alpha \delta^j \end{cases}$$

$$\tau \mu = \begin{cases} h^{\alpha} h^{\beta} \mu = h^{\alpha} h^{\beta} \mu \\ \beta \alpha \mu = \beta \alpha \mu \end{cases}$$

$$\tau^{\nu} = \begin{cases} h^{\alpha} h^{\beta} \delta^{\nu} = h^{\alpha} h^{\beta} \delta^{\nu} \\ \beta \alpha \delta^{\nu} = \beta \alpha \delta^{\nu} \end{cases}$$

$$\begin{cases} h^{\alpha} \gamma = \tau h^{\alpha} \gamma = h^{\alpha} \tau \gamma \\ \alpha \gamma = \tau \alpha \gamma = \alpha \tau \gamma \end{cases}$$

$$\begin{cases} h^{\beta} \delta^j = \tau h^{\beta} \delta^j = h^{\beta} \tau^j \\ \beta \delta^j = \tau \beta \delta^j = \beta \tau^j \end{cases}$$

$$\begin{cases} h^{\alpha} \mu = \tau h^{\alpha} \mu = h^{\alpha} \tau \mu \\ \alpha \mu = \tau \alpha \mu = \alpha \tau \mu \end{cases}$$

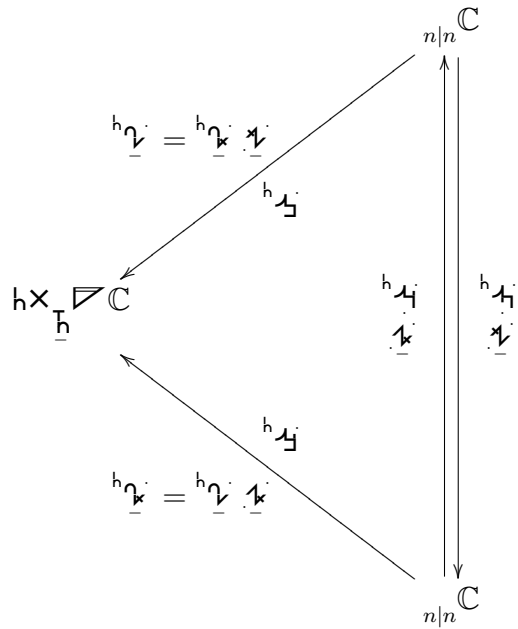
$$\begin{cases} h^{\beta} \delta^{\nu} = \tau h^{\beta} \delta^{\nu} = h^{\beta} \tau^{\nu} \\ \beta \delta^{\nu} = \tau \beta \delta^{\nu} = \beta \tau^{\nu} \end{cases}$$

$$\begin{cases} h^{\alpha} \gamma = \tau h^{\alpha} \gamma = h^{\alpha} \tau \gamma \\ \alpha \gamma = \tau \alpha \gamma = \alpha \tau \gamma \end{cases}$$

$$\begin{cases} h^{\beta} \delta^j = \tau h^{\beta} \delta^j = h^{\beta} \tau^j \\ \beta \delta^j = \tau \beta \delta^j = \beta \tau^j \end{cases}$$

$$\begin{cases} h^{\alpha} \mu = \tau h^{\alpha} \mu = h^{\alpha} \tau \mu \\ \alpha \mu = \tau \alpha \mu = \alpha \tau \mu \end{cases}$$

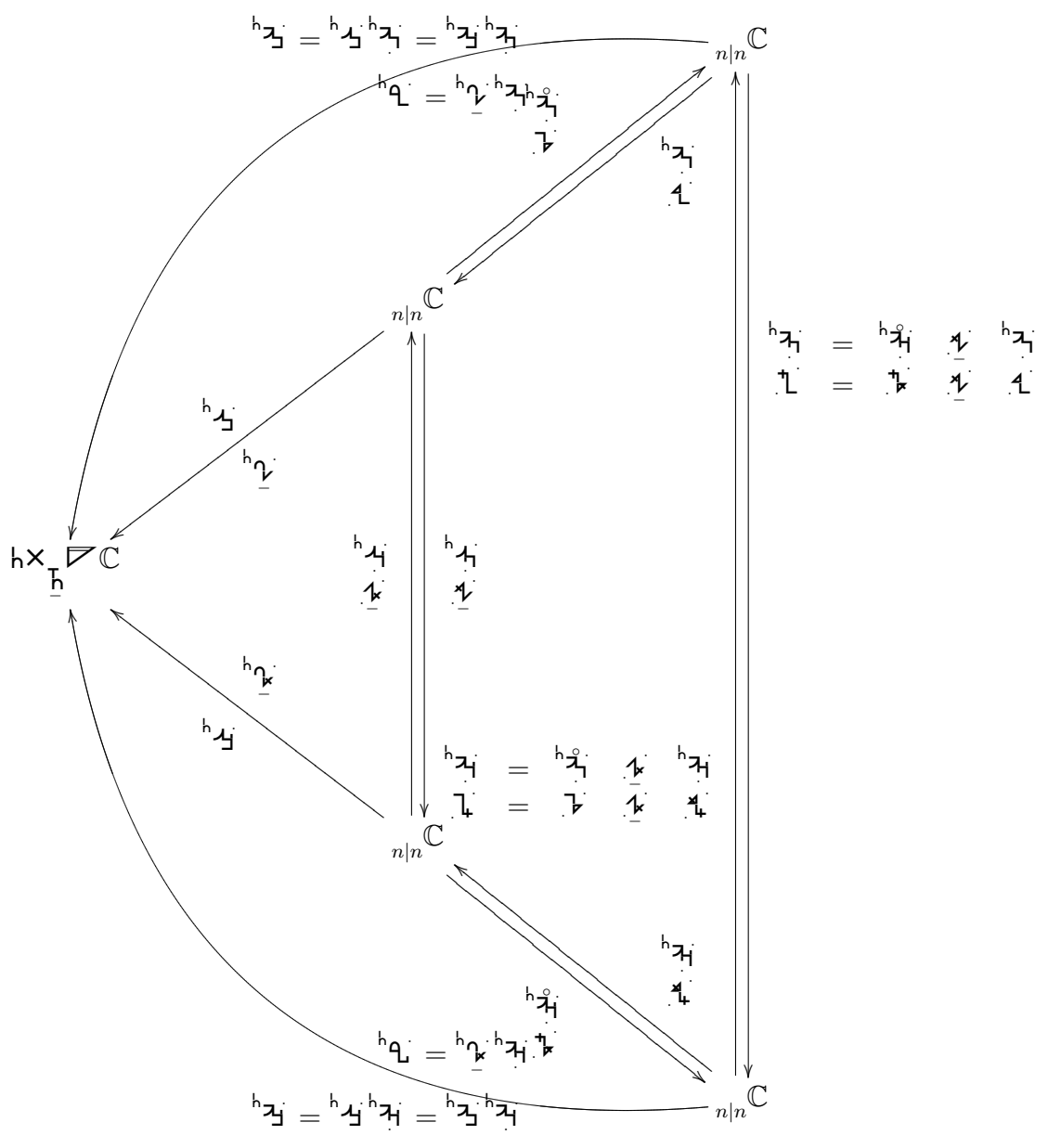
$$\begin{cases} {}^h \underline{\alpha}_i^\nu &= \underline{\tau}^i {}^h \underline{\alpha}_i^\nu = {}^h \underline{\alpha}_i^j \underline{\tau}^j \\ {}^h \underline{\beta}_i^\nu &= \underline{\tau}^i {}^h \underline{\beta}_i^\nu = {}^h \underline{\beta}_i^j \underline{\tau}^j \end{cases}$$



$h X_h C \ni {}^h \underline{\gamma}^\nu$ dual holonomic basis

$$\underline{\tau}_h \underline{\tau}_h = \underline{\tau}_h \underline{\tau}_h = \underline{\tau}_h \underline{\tau}_h$$

$$\underline{\tau}_h = \underline{\tau}_h \underline{\tau}_h : \mu \delta^\nu = \mu \underline{\tau}_h \underline{\tau}_h$$



$$hX_{\underline{h}} C \ni \begin{cases} h_{ij}^j \\ h_{ij}^j \end{cases} \text{ dual ONbasis}$$

$$h_{ij}^i \otimes_h h_{ij}^j = \eta^{ij}$$

$$\underline{1} = \begin{cases} h_{ij}^i h_{ij}^j \underline{1} \\ \underline{1}_h h_{ij}^j \underline{1} \end{cases} : \quad \delta^{ij} = \begin{cases} h_{ij}^i h_{ij}^j \\ \underline{1}_h h_{ij}^j \end{cases}$$

$$\begin{cases} \underline{h}^{\underline{z}^i \cdot \underline{v}} = \underline{h}^{\underline{v}} \cdot \underline{h}^{\underline{z}^i \cdot \underline{v}} & \begin{cases} \underline{h}^{\underline{z}^j} & = \underline{v}^{\lambda} \underline{h}^{\underline{z}^j} \\ \underline{h}^{\underline{z}^j} & = \underline{h}^{\underline{v}^{\lambda}} \underline{z}^j \end{cases} \\ \underline{h}^{\underline{z}^i \cdot \underline{v}} = \underline{h}^{\underline{v}} \cdot \underline{h}^{\underline{z}^i \cdot \underline{v}} & \begin{cases} \underline{h}^{\underline{z}^j} & = \underline{v}^{\lambda} \underline{h}^{\underline{z}^j} \\ \underline{h}^{\underline{z}^j} & = \underline{h}^{\underline{v}^{\lambda}} \underline{z}^j \end{cases} \end{cases}$$

$$\underline{h}^{\underline{v}} \cdot \underline{v} = \begin{cases} \underline{h}^{\underline{z}^i \cdot \underline{v}} \\ \underline{h}^{\underline{z}^i \cdot \underline{v}} \end{cases} : \quad \underline{h}^{\underline{v}} = \begin{cases} \underline{h}^{\underline{z}^k} \underline{h}^{\underline{z}^i \cdot \underline{v}} \\ \underline{h}^{\underline{z}^k} \underline{z}^i \end{cases}$$

$$\begin{cases} \underline{h}^{\underline{z}^i \cdot \underline{v}} = \underline{z}^i \underline{h}^{\underline{z}^i \cdot \underline{v}} & \begin{cases} \underline{h}^{\underline{z}^j} & = \underline{z}^i \underline{h}^{\underline{z}^j} \\ \underline{z}^i \underline{v} & = \underline{z}^i \underline{h}^{\underline{z}^j} \end{cases} \\ \underline{z}^i \underline{v} = \underline{z}^i \underline{h}^{\underline{z}^i \cdot \underline{v}} & \begin{cases} \underline{h}^{\underline{z}^j} & = \underline{z}^i \underline{h}^{\underline{z}^j} \\ \underline{z}^i \underline{v} & = \underline{z}^i \underline{h}^{\underline{z}^j} \end{cases} \end{cases}$$

