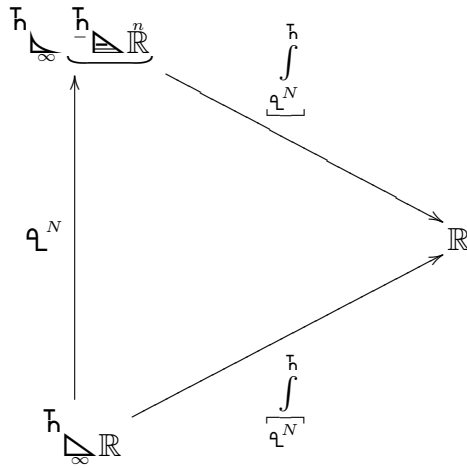


$$\mathfrak{h}: \mathbb{R}^N \in \mathbb{R}^N$$

$n\mathbb{R}_C^n$  structure



$$\text{Trg } \mathfrak{A} \in \mathfrak{h} \Rightarrow \int_{\mathbb{R}^N} \mathfrak{A} = \int_{\mathbb{R}^N} \mathfrak{A} \times \mathfrak{A} = \int_{\mathbb{R}^N} \mathfrak{A}$$

$$\text{Trg } \mathfrak{A} \in \mathfrak{h} \cap \mathfrak{h} \Rightarrow \int_{\mathbb{R}^N} \mathfrak{A} \times \mathfrak{A} = \int_{\mathbb{R}^N} \mathfrak{A} \times \mathfrak{A}$$

$$\text{LHS} = \int_{\mathbb{R}^N} \mathfrak{A} \times \mathfrak{A} = \det \mathfrak{A} \int_{\mathbb{R}^N} \mathfrak{A} \times \mathfrak{A} = \text{RHS}$$

$$\text{cpt Trg } \mathfrak{A} \in \mathfrak{h} \Rightarrow \int_{\mathbb{R}^N} \mathfrak{A} = \sum_{\alpha}^{\text{fin}} \int_{\mathbb{R}^N} \mathfrak{A} u_{\alpha}$$

$u_{\alpha} \prec \mathfrak{h}_{\alpha}$  lic fin atlas

$$\sum_{\alpha} u_{\alpha} = 1 \text{ part of unity}$$