

$$\circlearrowleft \circlearrowright \circlearrowleft \circlearrowright \bullet \text{ simple} \subset \frac{1 \in {}^{\mathbb{R}}\underline{K}^{\mathbb{C}}}{\circlearrowleft \underline{K}^{\mathbb{C}} | 1 = 0}$$

$$\circlearrowleft \underline{K}^{\mathbb{C}} = \frac{\mathbb{1} \in \circlearrowleft \underline{K}^{\mathbb{C}}}{\mathbb{1} | \circlearrowleft = 0} \subset {}^{\mathbb{R}}\underline{K}^{\mathbb{C}} = \frac{\mathbb{1} \in {}^{\mathbb{R}}\underline{K}^{\mathbb{C}}}{\mathbb{1} | \circlearrowleft = 0} = \circlearrowleft \underline{K}^{\mathbb{C}} \times \circlearrowright \underline{K}^{\mathbb{C}}$$

$$\circlearrowleft \underline{K}^{\mathbb{C}} = \underline{K}^{\mathbb{C}} \blacktriangleright \circlearrowleft \underline{K}^{\mathbb{C}} = \circlearrowleft \underline{K}^{\mathbb{C}} \times \circlearrowright \underline{K}^{\mathbb{C}}$$

$$\circlearrowright \underline{K}^{\mathbb{C}} = \frac{{}^{\mathbb{R}}\underline{K}^{\mathbb{C}}}{\langle \circlearrowright \rangle \ni 1 \in {}^{\mathbb{R}}\underline{K}^{\mathbb{C}}} = \circlearrowright \underline{K}^{\mathbb{C}} \times \circlearrowleft \underline{K}^{\mathbb{C}} \subset \underline{K}^{\mathbb{C}}$$

$$\circlearrowright \underline{K}^{\mathbb{C}} = \circlearrowleft \underline{K}^{\mathbb{C}}$$

$${}^{\mathbb{R}}\underline{K}^{\mathbb{C}} = {}^{\mathbb{R}}\underline{K}^{\mathbb{C}} \blacktriangleright {}^{\mathbb{R}}\underline{K}^{\mathbb{C}} = \circlearrowleft \underline{K}^{\mathbb{C}} \times \circlearrowright \underline{K}^{\mathbb{C}}$$

$$= {}^{\mathbb{R}}\underline{K}^{\mathbb{C}} \times \circlearrowright \underline{K}^{\mathbb{C}}$$

$$\circlearrowleft \underline{K}^{\mathbb{C}} = \circlearrowleft \underline{K}^{\mathbb{C}} \times \circlearrowright \underline{K}^{\mathbb{C}} = \overbrace{\circlearrowleft \underline{K}^{\mathbb{C}} \times \circlearrowright \underline{K}^{\mathbb{C}}}^{\circlearrowleft \underline{K}^{\mathbb{C}}} \times \circlearrowright \underline{K}^{\mathbb{C}}$$

$$= \circlearrowleft \underline{K}^{\mathbb{C}} \times \overbrace{\circlearrowright \underline{K}^{\mathbb{C}} \times \circlearrowleft \underline{K}^{\mathbb{C}}}^{\circlearrowright \underline{K}^{\mathbb{C}}}$$

$$\circlearrowright \underline{K}^{\mathbb{C}} = \frac{{}^{\mathbb{R}}\underline{K}^{\mathbb{C}}}{\langle \circlearrowright \rangle \ni 1 \in {}^{\mathbb{R}}\underline{K}^{\mathbb{C}} : \circlearrowleft \underline{K}^{\mathbb{C}} | 1 = 0} = \circlearrowright \underline{K}^{\mathbb{C}} \times \circlearrowleft \underline{K}^{\mathbb{C}}$$

$$\left\{ \begin{array}{l} \circlearrowleft \underline{K}^{\mathbb{C}} \\ {}^{\mathbb{R}}\underline{K}^{\mathbb{C}} \\ \circlearrowright \underline{K}^{\mathbb{C}} \end{array} \right\} = \left\{ \begin{array}{l} \circlearrowleft \underline{K}^{\mathbb{C}} \\ {}^{\mathbb{R}}\underline{K}^{\mathbb{C}} \\ \circlearrowright \underline{K}^{\mathbb{C}} \end{array} \right\} \times \circlearrowright \underline{K}^{\mathbb{C}}$$

$$= \left\{ \begin{array}{l} \circlearrowleft \underline{K}^{\mathbb{C}} \\ {}^{\mathbb{R}}\underline{K}^{\mathbb{C}} \\ \circlearrowright \underline{K}^{\mathbb{C}} \end{array} \right\} \times \overbrace{\circlearrowright \underline{K}^{\mathbb{C}} \times \circlearrowleft \underline{K}^{\mathbb{C}}}^{\circlearrowright \underline{K}^{\mathbb{C}}}$$

$$\begin{aligned}
\mathbb{R}_{\underline{K}}^{\perp C} &= \mathbb{R}_{\underline{K}}^{\perp C} \times \mathbb{R}_{\underline{K}}^{\times C} \\
&= \mathbb{R}_{\underline{K}}^{\perp C} \times \mathbb{R}_{\underline{K}}^{\mathbb{M} C} \times \mathbb{R}_{\underline{K}}^{\times C} \\
&= \mathbb{R}_{\underline{K}}^{\perp C} \times \mathbb{R}_{\underline{K}}^{\times C} \times \mathbb{R}_{\underline{K}}^{\mathbb{M} C} \times \mathbb{R}_{\underline{K}}^{\times C}
\end{aligned}$$

$$\mathbb{R}_{\underline{K}}^{\times C} = \frac{\mathbb{R}_{\underline{K}}^{\perp C}}{\mathbf{1} \in \mathbb{R}_{\underline{K}}^{\perp C}: \mathbb{1}_{\underline{K}}^C | \mathbf{1} \neq 0: \mathbb{1}_{\underline{K}}^C | \mathbf{1} = 0} = \mathbb{R}_{\underline{K}}^{\times C} \times \mathbb{R}_{\underline{K}}^{\times C}$$

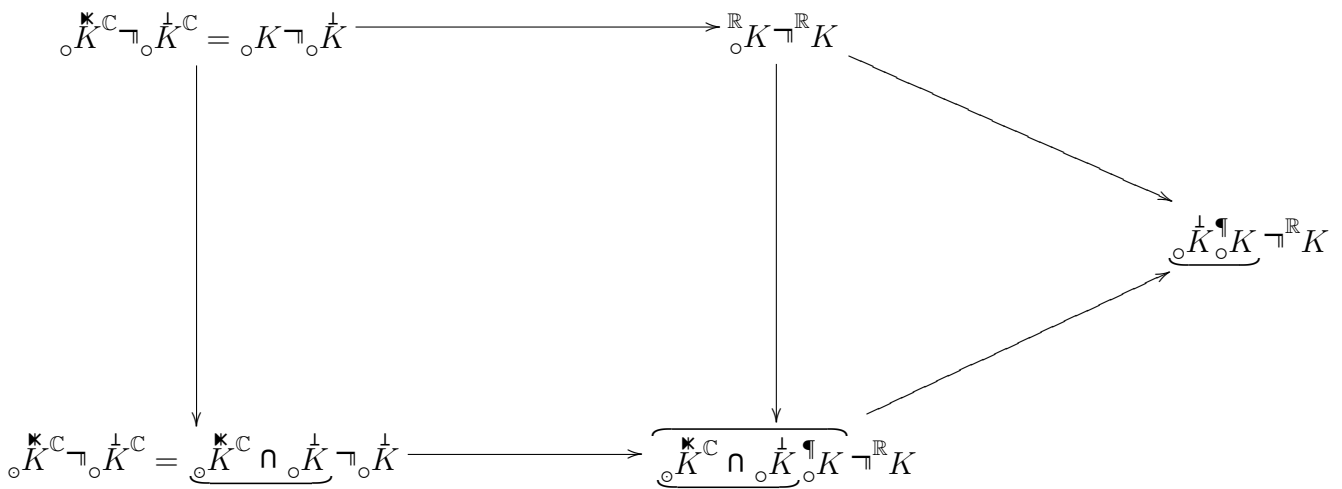
$$\begin{aligned}
\mathbb{R}_{\underline{K}}^{\mathbb{M} C} &= \mathbb{R}_{\underline{K}}^{\perp C} \times \mathbb{R}_{\underline{K}}^{\mathbb{M} C} = \overbrace{\mathbb{R}_{\underline{K}}^{\perp C} \times \mathbb{R}_{\underline{K}}^{\times C}}^{\mathbb{R}_{\underline{K}}^{\mathbb{M} C}} \times \mathbb{R}_{\underline{K}}^{\mathbb{M} C} \\
&= \mathbb{R}_{\underline{K}}^{\perp C} \times \overbrace{\mathbb{R}_{\underline{K}}^{\times C} \times \mathbb{R}_{\underline{K}}^{\mathbb{M} C}}^{\mathbb{R}_{\underline{K}}^{\mathbb{M} C}}
\end{aligned}$$

$$\mathbb{R}_{\underline{K}}^{\mathbb{M} C} = \frac{\mathbb{R}_{\underline{K}}^{\perp C}}{\mathbf{1} \in \mathbb{R}_{\underline{K}}^{\perp C}: \mathbb{1}_{\underline{K}}^C | \mathbf{1} \neq 0} = \mathbb{R}_{\underline{K}}^{\times C} \times \mathbb{R}_{\underline{K}}^{\mathbb{M} C}$$

$$\begin{aligned} \mathbb{R}\underline{K}^C &= \mathbb{R}\underline{K}^{\perp C} \times \overbrace{\mathbb{R}\underline{K}^C \times \mathbb{R}\underline{K}^C \times \mathbb{R}\underline{K}^C}^{\mathbb{R}\underline{K}^C} = \overbrace{\mathbb{R}\underline{K}^{\perp C} \times \mathbb{R}\underline{K}^C}^{\mathbb{R}\underline{K}^C} \times \mathbb{R}\underline{K}^C \\ &= \mathbb{R}\underline{K}^C \times \overbrace{\mathbb{R}\underline{K}^C \times \mathbb{R}\underline{K}^C}^{\mathbb{R}\underline{K}^C} \times \overbrace{\mathbb{R}\underline{K}^C \times \mathbb{R}\underline{K}^C}^{\mathbb{R}\underline{K}^C} = \mathbb{R}\underline{K}^C \times \overbrace{\mathbb{R}\underline{K}^C \times \mathbb{R}\underline{K}^C \times \mathbb{R}\underline{K}^C}^{\mathbb{R}\underline{K}^C} \end{aligned}$$

$$\mathbb{R}\underline{K}^C = \frac{\mathbb{R}\underline{K}^{\perp C}}{\langle \circ \rangle \neq 1 \in \mathbb{R}\underline{K}^{\perp C}} = \overbrace{\mathbb{R}\underline{K}^C \times \mathbb{R}\underline{K}^C}^{\mathbb{R}\underline{K}^C} \times \overbrace{\mathbb{R}\underline{K}^C \times \mathbb{R}\underline{K}^C}^{\mathbb{R}\underline{K}^C}$$

$$\mathbb{R}\underline{K}^C \times \mathbb{R}\underline{K}^C = \mathbb{R}\underline{K}^C: \quad \mathbb{R}\underline{K}^C \times \mathbb{R}\underline{K}^C = \mathbb{R}\underline{K}^C$$



$$\overbrace{\mathbb{R}\underline{K}^C \sqcap \mathbb{R}\underline{K}^C}^{\mathbb{R}\underline{K}^C} \sqcap \mathbb{R}\underline{K}^C = \mathbb{R}\underline{K}^C$$

$$\mathbb{R}\underline{K}^C = \mathbb{R}\underline{K}^C \triangleleft_1 \mathbb{R}\underline{K}^C$$

$$\mathbb{R}\underline{K}^C = \mathbb{R}\underline{K}^C \triangleleft_1 \mathbb{R}\underline{K}^C$$

$$\mathbb{R}\underline{K}^C = \mathbb{R}\underline{K}^C \triangleleft_1 \mathbb{R}\underline{K}^C$$

$$\mathbb{R} \underset{\circ}{K} \underset{\perp}{=}^{\mathbb{C}} = \mathbb{R} \underset{\perp}{K} \underset{1}{\blacktriangleleft} \mathbb{R} \underset{\circ}{K}^{\mathbb{C}}$$

