

$$\begin{aligned} \mathbb{R} \underline{K}^C &= \mathbb{R} \underline{K}^C \times_{\text{Car}} \mathbb{1} \underline{K}^C \subseteq \mathbb{R} \underline{K}^C \\ \mathbb{R} \underline{K}^C &= \mathbb{R} \underline{K}^C \triangleleft_{\mathbb{R} \underline{K}^C} \mathbb{R} \underline{K}^C = \frac{\mathfrak{b} \in \mathbb{R} \underline{K}^C}{\mathfrak{b} \times \mathbb{R} \underline{K}^C = 0} = \mathbb{R} \underline{K}^C \end{aligned}$$

$$\mathbb{1} \underline{K}^C | \mathfrak{1} = 0 \Rightarrow \mathbb{R} \underline{K}^C \subseteq \left\{ \begin{array}{l} \underline{K}^C \\ \mathbb{1} \underline{K}^C \end{array} \right.$$

$$\mathbb{R} \underline{K}^C \ni \mathfrak{b} = \mathfrak{b} + \mathfrak{b} \Rightarrow \mathfrak{b} \in \mathbb{R} \underline{K}^C \ni \mathfrak{b}: \mathbb{R} \underline{K}^C \ni \mathfrak{b} = \mathfrak{b} + \mathfrak{b}$$

$$\left\{ \begin{array}{l} \mathfrak{b} \times \mathfrak{b} + \mathfrak{b} \times \mathfrak{b} = \underline{\mathfrak{b} + \mathfrak{b}} \times \mathfrak{b} = \underline{\mathfrak{b} \mathfrak{1}} \mathfrak{b} + \mathfrak{b} = \underline{\mathfrak{b} \mathfrak{1}} \mathfrak{b} + \underline{\mathfrak{b} \mathfrak{1}} \mathfrak{b} \\ \mathfrak{b} \times \mathfrak{b} + \mathfrak{b} \times \mathfrak{b} = \underline{\mathfrak{b} + \mathfrak{b}} \times \mathfrak{b} = \underline{\mathfrak{b} \mathfrak{1}} \mathfrak{b} + \mathfrak{b} = 0 \end{array} \right. \Rightarrow \left\{ \begin{array}{l} \mathfrak{b} \times \mathfrak{b} = \underline{\mathfrak{b} \mathfrak{1}} \mathfrak{b}: \mathfrak{b} \times \mathfrak{b} = \underline{\mathfrak{b} \mathfrak{1}} \mathfrak{b} \\ \mathfrak{b} \times \mathfrak{b} = 0: \mathfrak{b} \times \mathfrak{b} = 0 \end{array} \right.$$

$$\mathbb{R} \underline{K}^C \subseteq_{\text{Car}} \mathbb{R} \underline{K}^C = \mathbb{R} \underline{K}^C \triangleleft_{\mathbb{R} \underline{K}^C} \mathbb{R} \underline{K}^C$$

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

$$\mathbb{1} \underline{K}^C = \mathbb{1} \underline{K}^C$$

$$\left\{ \begin{array}{l} \mathbb{R} \underline{K}^C \\ \mathbb{1} \underline{K}^C \end{array} \right. = \mathbb{R} \underline{K}^C \times \left\{ \begin{array}{l} \mathbb{R} \underline{K}^C \\ \mathbb{1} \underline{K}^C \end{array} \right.$$

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

$$\mathbb{R} \underline{K}^C = \frac{\mathbb{R} \underline{K}^C \subseteq \mathbb{R} \underline{K}^C}{\mathfrak{1} \in \mathbb{R} \underline{K}^C: \mathbb{1} \underline{K}^C | \mathfrak{1} = 0} = \mathbb{R} \underline{K}^C \times \mathbb{R} \underline{K}^C$$

$$\mathbb{1}_{\underline{K}^C} = \mathbb{1}_{\underline{K}^C} \times \mathbb{1}_{\underline{K}^C}$$

$$\mathbb{1}_{\underline{K}^C} = \frac{\mathbb{R}^{\underline{1}^C} \sqsubseteq \mathbb{1}_{\underline{K}^C}}{\mathbb{1} \in \mathbb{R}^{\underline{1}^C}: \mathbb{1}_{\underline{K}^C} | \mathbb{1} = 0}$$

$$\mathbb{R}^{\underline{K}^C} \sqsubseteq_{\text{Car}} \mathbb{R}^{\underline{1}^C} = \mathbb{R}^{\underline{K}^C} \times \mathbb{1}_{\underline{K}^C} = \mathbb{R}^{\underline{1}^C} \times \mathbb{1}_{\underline{K}^C}$$

$$\mathbb{R}^{\underline{K}^C} \sqsubseteq_{\text{Car}} \mathbb{R}^{\underline{1}^C}$$

$$\begin{aligned} \left\{ \begin{array}{l} \mathbb{R}^{\underline{1}^C} \\ \mathbb{R}^{\underline{K}^C} \end{array} \right\} &= \left\{ \begin{array}{l} \mathbb{R}^{\underline{K}^C} \\ \mathbb{R}^{\underline{K}^C} \end{array} \right\} \times \overbrace{\mathbb{R}^{\underline{K}^C} \times \mathbb{1}_{\underline{K}^C}}^{\mathbb{R}^{\underline{K}^C}} = \left\{ \begin{array}{l} \mathbb{R}^{\underline{K}^C} \times \mathbb{R}^{\underline{K}^C} \times \mathbb{R}^{\underline{K}^C} \\ \mathbb{R}^{\underline{K}^C} \end{array} \right\} \\ &= \left\{ \begin{array}{l} \mathbb{R}^{\underline{K}^C} \times \mathbb{R}^{\underline{K}^C} \times \mathbb{1}_{\underline{K}^C} \\ \mathbb{R}^{\underline{K}^C} \end{array} \right\} \end{aligned}$$

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

$$\left\{ \begin{array}{l} \mathbb{b} \in \mathbb{R}^{\underline{1}^C} \\ \mathbb{b} \in \mathbb{R}^{\underline{K}^C} \sqsubseteq \mathbb{R}^{\underline{K}^C} \end{array} \right\} \Rightarrow \mathbb{b} \times \mathbb{b} = \mathbb{b} | \mathbb{b} \Rightarrow \mathbb{1}_{\underline{K}^C} | \mathbb{1} = 0 \Leftrightarrow \mathbb{R}^{\underline{1}^C} \sqsubseteq \mathbb{R}^{\underline{K}^C}$$

$$\mathbb{R}^{\underline{K}^C} = \mathbb{R}^{\underline{1}^C} \times \mathbb{R}^{\underline{K}^C} = \overbrace{\mathbb{R}^{\underline{1}^C} \times \mathbb{R}^{\underline{K}^C}}^{\mathbb{R}^{\underline{K}^C}} \times \mathbb{R}^{\underline{K}^C}$$

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

$$\mathbb{R}_{\underline{K}^C} = \mathbb{R}_{\underline{K}^C} \times \underbrace{\left(\mathbb{R}_{\underline{K}^C} \times \mathbb{R}_{\underline{K}^C} \times \mathbb{R}_{\underline{K}^C} \right)}_{\mathbb{R}_{\underline{K}^C}} = \overbrace{\mathbb{R}_{\underline{K}^C} \times \mathbb{R}_{\underline{K}^C}}^{\mathbb{R}_{\underline{K}^C}} \times \mathbb{R}_{\underline{K}^C}$$

$$\mathbb{R}_{\underline{K}^C} \ni 1 \Rightarrow \mathbb{R}_{\underline{K}^C} = \frac{b \in \mathbb{R}_{\underline{K}^C}}{\bigwedge_{b \in \mathbb{R}_{\underline{K}^C}} b * b = b \uparrow b}$$

$$\mathbb{R}_{\underline{K}^C} = \frac{\mathbb{R}_{\underline{K}^C}}{1 \in \mathbb{R}_{\underline{K}^C}} = \overbrace{\mathbb{R}_{\underline{K}^C} \times \mathbb{R}_{\underline{K}^C}}^{\mathbb{R}_{\underline{K}^C}} \times \overbrace{\mathbb{R}_{\underline{K}^C} \times \mathbb{R}_{\underline{K}^C}}^{\mathbb{R}_{\underline{K}^C}}$$

$$\mathbb{R}_{\underline{K}^C} \supset \mathbb{R}_{\underline{K}^C} \supset \mathbb{R}_{\underline{K}^C} \rightarrow \mathbb{R}_{\underline{K}^C} \rightarrow \mathbb{R}_{\underline{K}^C} \rightarrow \mathbb{R}_{\underline{K}^C}$$

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

$$\mathbb{K}_{\perp}^{\leq C} = \mathbb{K}_{\perp}^C \triangleleft_1 \mathbb{K}_{\perp}^C$$