$$\underline{\text{ꙅ⊔ᚴ↻}}\ \overset{\mathbb{N}}{\overbrace{↻↻}}\ \cap\ \underline{\text{ᚴ⊔ꙅ↻}}\ \overset{\mathbb{N}}{\overbrace{↻↻}}\ ↻ = \varnothing$$

$$\underline{\text{ᚴ⊔ꙅ↻}}\ \overset{\mathbb{N}}{\overbrace{↻↻}}\ \cap\ \underline{\text{ꙅ⊔ᚴ↻}}\ \overset{\mathbb{N}}{\overbrace{↻↻}}\ ↻ = \varnothing$$

$$ᚴ\ \overset{\text{ꙅ⊔ᚴ↻}}{\bigvee_{\text{Ꙡ}}}\ \overset{\text{ᚴ⊔ꙅ↻}}{\bigvee_{\text{ᚴ}}}\ Ꙡ\ \overset{m}{\overbrace{↻↻}} = ᚴ\ \overset{n}{\overbrace{↻↻}}\ ↻ = ᚴ↻\ \overset{n}{\overbrace{↻↻}}$$

$$\begin{cases} m \leqslant n & \underset{\text{inj}}{\Longrightarrow} Ꙡ = ᚴ↻\ \overset{n-m}{\overbrace{↻↻}} = ᚴ\ \overset{n-m}{\overbrace{↻↻}}\ ↻ \in ᚴ↻\ ᚴ \\ m > n & \underset{\text{inj}}{\Longrightarrow} ᚴ↻ = Ꙡ\ \overset{m-n}{\overbrace{↻↻}} = Ꙡ\ \overset{m-n-1}{\overbrace{↻↻}}\ ↻↻ \underset{\text{inj}}{\Longrightarrow} Ꙡ = Ꙡ\ \overset{m-n-1}{\overbrace{↻↻}}\ ↻ \in ꙅ↻\ ᚴ \end{cases}$$

$$\underline{\text{ꙅ⊔ᚴ↻}}\ \overset{\mathbb{N}}{\overbrace{↻↻}}\ \xrightarrow[\text{bij}]{↻}\ \underline{\text{ꙅ⊔ᚴ↻}}\ \overset{\mathbb{N}}{\overbrace{↻↻}}\ ↻$$

$$\underline{\text{ᚴ⊔ꙅ↻}}\ \overset{\mathbb{N}}{\overbrace{↻↻}}\ ↻\ \xleftarrow[\text{bij}]{↻}\ \underline{\text{ᚴ⊔ꙅ↻}}\ \overset{\mathbb{N}}{\overbrace{↻↻}}$$

$$\text{Ꜧ}\llcorner\text{Ꞇ}\text{ꙮ} \subset \text{Ꝥ} \subset \text{Ꜧ} \underset{\underset{\text{inj}}{\xrightarrow{\quad\text{inj}\quad}}}{\xleftarrow{\qquad\qquad}} \text{Ꞇ} \supset \text{Ꝥ} \supset \text{Ꞇ}\llcorner\text{Ꜧ}\text{ꙮ}$$

$$\text{Ꝥ}\text{ꙮ}\text{ꙅ} = \text{Ꝥ} \cap \text{Ꞇ}\text{ꙅ}$$

$$\text{Ꝥ}\text{ꙅ}\text{ꙮ} = \text{Ꝥ} \cap \text{Ꜧ}\text{ꙮ}$$

$$\Rightarrow\ \text{Ꜧ}\llcorner\underline{\text{Ꝥ} \cup \text{Ꝥ}\text{ꙅ}} \underset{\underset{\text{bij}}{\xrightarrow{\quad\text{bij}\quad}}}{\xleftarrow{\qquad\qquad}} \text{Ꞇ}\llcorner\underline{\text{Ꝥ}\text{ꙮ} \cup \text{Ꝥ}}$$

$$\text{h}\text{ꙮ} \in \text{Ꝥ}\text{ꙮ} \cup \text{Ꝥ} \Rightarrow \begin{cases} \text{h}\text{ꙮ} \in \text{Ꝥ}\text{ꙮ} & \underset{\text{inj}}{\Rightarrow} \text{h} \in \text{Ꝥ} \\ \text{h}\text{ꙮ} \in \text{Ꝥ} & \Rightarrow \text{h}\text{ꙮ} \in \text{Ꝥ} \cap \text{Ꜧ}\text{ꙮ} = \text{Ꝥ}\text{ꙅ}\text{ꙮ} \underset{\text{inj}}{\Rightarrow} \text{h} \in \text{Ꝥ}\text{ꙅ} \end{cases}$$

$$\Rightarrow \text{h} \in \text{Ꝥ} \cup \text{Ꝥ}\text{ꙅ} \Rightarrow \overbrace{\text{Ꜧ}\llcorner\underline{\text{Ꝥ} \cup \text{Ꝥ}\text{ꙅ}}}\text{ꙮ} \subset \text{Ꞇ}\llcorner\underline{\text{Ꝥ}\text{ꙮ} \cup \text{Ꝥ}}$$

$$\text{ʌ} \in \text{Ꞇ}\llcorner\underline{\text{Ꝥ} \cup \text{Ꜧ}\text{ꙮ}} \subset \text{Ꞇ}\llcorner\text{Ꝥ} \subset \text{Ꜧ}\text{ꙮ} \Rightarrow \overset{\text{Ꝥ}}{\underset{\text{h}}{\bigvee}} \text{ʌ} = \text{h}\text{ꙮ}$$

$$\text{ϟ}\,\text{h} \in \text{Ꝥ} \cup \text{Ꝥ}\text{ꙅ} \Rightarrow \begin{cases} \text{h} \in \text{Ꝥ} & \Rightarrow \text{ʌ} = \text{h}\text{ꙮ} \in \text{Ꝥ}\text{ꙮ}\ \text{ϟ} \\ \text{h} \in \text{Ꝥ}\text{ꙅ} & \Rightarrow \text{ʌ} = \text{h}\text{ꙮ} \in \text{Ꝥ}\text{ꙅ}\text{ꙮ} \subset \text{Ꝥ}\ \text{ϟ} \end{cases}$$

$$\Rightarrow \text{ʌ} \in \text{Ꜧ}\text{ꙮ} \cup \text{Ꝥ} \Rightarrow \text{h} \in \text{Ꜧ}\llcorner\underline{\text{Ꝥ} \cup \text{Ꝥ}\text{ꙅ}}$$

$$\text{bij} \quad \overset{\curlyvee}{\underset{\curlywedge}{\text{bij}}}$$

$$\hbar{\llcorner} \begin{cases} \underline{\hbar{\llcorner}\lambda\iota}\; \overset{\mathbb{N}}{\frown}\curlyvee\iota \;\cup \\ \underline{\lambda{\llcorner}\hbar\curlyvee}\; \overset{\mathbb{N}}{\frown}\iota\curlyvee\iota \end{cases} \qquad\qquad \lambda{\llcorner} \begin{cases} \underline{\lambda{\llcorner}\hbar\curlyvee}\; \overset{\mathbb{N}}{\frown}\iota\curlyvee \;\cup \\ \underline{\hbar{\llcorner}\lambda\iota}\; \overset{\mathbb{N}}{\frown}\curlyvee\iota\curlyvee \end{cases}$$

$$\hbar{\llcorner}\lambda\iota \subset \underline{\hbar{\llcorner}\lambda\iota}\; \overset{\mathbb{N}}{\frown}\curlyvee\iota$$

$$\underline{\lambda{\llcorner}\hbar\curlyvee}\; \overset{\mathbb{N}}{\frown}\iota\curlyvee \supset \lambda{\llcorner}\hbar\curlyvee$$

$$\underline{\hbar{\llcorner}\lambda\iota}\; \overset{\mathbb{N}}{\frown}\curlyvee\iota\, \curlyvee\iota = \underline{\hbar{\llcorner}\lambda\iota}\; \overset{\mathbb{N}}{\frown}\curlyvee\iota \cap \lambda\iota$$

$$\underline{\lambda{\llcorner}\hbar\curlyvee}\; \overset{\mathbb{N}}{\frown}\iota\curlyvee\, \iota\curlyvee = \underline{\lambda{\llcorner}\hbar\curlyvee}\; \overset{\mathbb{N}}{\frown}\iota\curlyvee \cap \hbar\curlyvee$$

$$h\curlyvee \in \underline{\lambda{\llcorner}\hbar\curlyvee}\; \overset{\mathbb{N}}{\frown}\iota\curlyvee \Rightarrow \bigvee_{k}^{\lambda{\llcorner}\hbar\curlyvee} h\curlyvee = k\; \overset{n}{\frown}\iota\curlyvee \underset{k\notin h\curlyvee}{\Longrightarrow} n>0 \Rightarrow h\curlyvee = k\; \overset{n-1}{\frown}\iota\curlyvee\, \iota\curlyvee \in \underline{\lambda{\llcorner}\hbar\curlyvee}\; \overset{\mathbb{N}}{\frown}\iota\curlyvee\, \iota\curlyvee$$