$$\daleth \in \triangleleft\mathbb{K}$$

$$\complement(\daleth) = \frac{\daleth \xleftarrow[\text{lin autom}]{\sigma} \daleth}{\sigma\underbrace{\daleth + \daleth} = \sigma\daleth + \sigma\daleth: \quad \sigma\underbrace{x \cdot \daleth} = {}^{\sigma}x \cdot \sigma\daleth}$$

$$\mathbb{h}_{\neg}\daleth = \frac{\daleth \in \daleth}{\bigwedge_{\sigma}^{\mathbb{h}} \sigma\daleth = \daleth} \sqsubset \daleth \text{ fix lin}$$

$$\frac{\mathbb{h}_{\neg}\daleth}{\mathbb{h}_{\neg}\mathbb{K}} = \frac{\daleth}{\mathbb{K}}: \quad \dim_{\mathbb{h}_{\neg}\mathbb{K}} \mathbb{h}_{\neg}\daleth = \dim_{\mathbb{K}} \daleth$$

$$\mathbb{h}_{\neg}\daleth = \mathcal{B} \underset{\text{free}}{\cdot} \mathbb{h}_{\neg}\mathbb{K} \Rightarrow \daleth = \mathcal{B} \underset{\text{free}}{\cdot} \mathbb{K}$$

$$\underset{\Bbbk}{\text{free}}\ \gimel^{9} \cdots \gimel^{n} \in \mathbb{h}_{\neg}\daleth \overset{(!)}{\Rightarrow} \gimel^{9} \cdots \gimel^{n}\ \underset{\mathbb{K}}{\text{free}}$$

$$\text{Ind}_{n \geqslant 0}:$$

$$n = 0: \quad \gimel^{9}\ \underset{\Bbbk}{\text{free}} \Rightarrow \gimel^{9} \neq 0 \Rightarrow \gimel^{9}\ \underset{\mathbb{K}}{\text{free}}$$

$$0 \leqslant n \curvearrowright n+1: \quad \underset{\Bbbk}{\text{free}}\ \gimel^{0} \cdots \gimel^{n} \in \mathbb{h}_{\neg}\daleth$$

$$\lightning \text{ not } \gimel^{0} \cdots \gimel^{n}\ \underset{\mathbb{K}}{\text{free}} \Rightarrow 0 = \sum_{0 \leqslant i \leqslant n} \gimel^{i}\ {}_{i}\daleth = \gimel^{j}\ \underbrace{{}_{j}\daleth}_{\neq 0} + \sum_{i \neq j} \gimel^{i}\ {}_{i}\daleth \Rightarrow 0 = \gimel^{j} + \sum_{i \neq j} \gimel^{i}\ \frac{{}_{i}\daleth}{{}_{j}\daleth}$$

$$\bigwedge_{\sigma}^{\mathbb{h}} 0 = \sigma\left(\gimel^{j} + \sum_{i \neq j} \gimel^{i} \frac{{}_{i}\daleth}{{}_{j}\daleth}\right) = \sigma\ \gimel^{j} + \sum_{i \neq j} \sigma\ \gimel^{i}\ {}^{\sigma}\frac{{}_{i}\daleth}{{}_{j}\daleth} = \gimel^{j} + \sum_{i \neq j} \gimel^{i}\ \frac{{}^{\sigma}{}_{i}\daleth}{{}^{\sigma}{}_{j}\daleth}$$

$$\Rightarrow 0 = \sum_{i \neq j} \gimel^{i}\ \underbrace{\frac{{}_{i}\daleth}{{}_{j}\daleth} - \frac{{}^{\sigma}{}_{i}\daleth}{{}^{\sigma}{}_{j}\daleth}} \underset{\text{ind}}{\Rightarrow} \bigwedge_{i \neq 0} \frac{{}_{i}\daleth}{{}_{j}\daleth} = \frac{{}^{\sigma}{}_{i}\daleth}{{}^{\sigma}{}_{j}\daleth} \Rightarrow \frac{{}_{i}\daleth}{{}_{j}\daleth} \in \mathbb{h}_{\neg}\mathbb{K} = \Bbbk \ni 1$$

$$0 = \gimel^{j} + \sum_{i \neq j} \gimel^{i}\ \frac{{}_{i}\daleth}{{}_{j}\daleth} \Rightarrow \text{ not } \underset{\Bbbk}{\text{free}}\ \gimel^{0} \cdots \gimel^{n} \lightning$$