

Konig^{11,40}

Konig(k)

$$\begin{aligned} &\equiv_{\text{def}} \forall tree: ((n:\mathbb{N} \times (\{0..n^-\} \rightarrow \{0..k^-\})) \rightarrow \mathbb{B}). \\ &\quad (\forall i, j:\mathbb{N}. (i \leq j) \Rightarrow (\forall x: (\{0..j^-\} \rightarrow \{0..k^-\}). (\uparrow(tree(<j, x>))) \Rightarrow (\uparrow(tree(<i, x>))))) \\ &\quad \Rightarrow (\neg(\exists b:\mathbb{N}. (\forall x: (\{0..b^-\} \rightarrow \{0..k^-\}). \neg(\uparrow(tree(<b, x>))))) \\ &\quad \Rightarrow (\exists s:\mathbb{N} \rightarrow \{0..k^-\}. (\forall n:\mathbb{N}. \uparrow(tree(<n, s>)))) \end{aligned}$$

clarification:

Konig(k)

$$\begin{aligned} &\equiv_{\text{def}} \forall tree: ((n:\mathbb{N} \times (\{0..n^-\} \rightarrow \{0..k^-\})) \rightarrow \mathbb{B}). \\ &\quad (\forall i:\mathbb{N}, j:\mathbb{N}. \\ &\quad (i \leq j) \Rightarrow (\forall x: (\{0..j^-\} \rightarrow \{0..k^-\}). (\uparrow(tree(<j, x>))) \Rightarrow (\uparrow(tree(<i, x>))))) \\ &\quad \Rightarrow (\neg(\exists b:\mathbb{N}. (\forall x: (\{0..b^-\} \rightarrow \{0..k^-\}). \neg(\uparrow(tree(<b, x>))))) \\ &\quad \Rightarrow (\exists s:\mathbb{N} \rightarrow \{0..k^-\}. (\forall n:\mathbb{N}. \uparrow(tree(<n, s>)))) \end{aligned}$$