

t21_ordinal3
(TMGEPi9BUZhjFd2w8ufoVE2afhcqPPP7Naz)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k10_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v3_ordinal1 X2) \Rightarrow ((X0 \in X1) \Rightarrow (k10_ordinal2 X2 X0 \in k10_ordinal2 \\ & X2 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\neg \\ & (\neg X0 \in X1) \wedge ((X0 \neq X1) \wedge (\neg X1 \in X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (\neg X1 \in X0) \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v3_ordinal1 X2) \Rightarrow ((k10_ordinal2 X0 X1 = k10_ordinal2 X0 X2) \Rightarrow (X1 = \\ & X2)))) \end{aligned}$$