

t33\_ordinal3 (TM-  
Pufwq4ZRjJjva4RXaGVCuYdsoodxPX1JW)

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Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k11\_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v3\_ordinal1 X2) \Rightarrow ((X1 \in X2) \Rightarrow ((X0 = k1\_xboole\_0) \vee (k11\_ordinal2 \\ & X1 X0 \in k11\_ordinal2 X2 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow (\neg \\ & (\neg X0 \in X1) \wedge ((X0 \neq X1) \wedge (\neg X1 \in X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (\neg X1 \in X0) \quad (3)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v3\_ordinal1 X2) \Rightarrow ((k11\_ordinal2 X0 X1 = k11\_ordinal2 X2 X1) \Rightarrow (( \\ & X1 = k1\_xboole\_0) \vee (X0 = X2)))))) \end{aligned}$$