

t24\_ordinal3  
(TMQfto1YiS8NUrHxg8hp7XEDwzNCow35dbY)

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Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow ((X0 \neq k1\_xboole\_0) \Rightarrow (k1\_xboole\_0 \in X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v3\_ordinal1 X2) \Rightarrow ((r1\_ordinal1 X0 X1) \Rightarrow (r1\_ordinal1 (k10\_ordinal2 \\ & X0 X2) (k10\_ordinal2 X1 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v3\_ordinal1 X0) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v3\_ordinal1 X2) \Rightarrow ((r1\_ordinal1 X0 X1) \Rightarrow (r1\_ordinal1 (k10\_ordinal2 \\ & X2 X0) (k10\_ordinal2 X2 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (k10\_ordinal2 k1\_xboole\_0 X0 = X0) \quad (4)$$

Assume the following.

$$\forall X0.r1\_tarski k1\_xboole\_0 X0 \quad (5)$$

Assume the following.

$$\forall X0.(v3\_ordinal1 X0) \Rightarrow (k10\_ordinal2 X0 k1\_xboole\_0 = X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(v3\_ordinal1 X1) \Rightarrow ((X0 \in X1) \Rightarrow (v3\_ordinal1 X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v3\_ordinal1 X0) \wedge (v3\_ordinal1 X1)) \Rightarrow ( \\ & (r1\_ordinal1 X0 X1) \Leftrightarrow (r1\_tarski X0 X1)) \end{aligned} \quad (8)$$

**Theorem 1**

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow ((r1\_ordinal1\ X0\ (k10\_ordinal2\ X0\ X1)) \wedge (r1\_ordinal1\ X1\ (k10\_ordinal2\ X0\ X1))))$$