

t53_ordinal3
(TMFXrhZ7BZZZrFb357xHQcdF371dMpgoJyD)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_ordinal3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

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

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow ((r1_ordinal1 X0 X1) \vee (X1 \in X0))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(v3_ordinal1 X1) \Rightarrow ((X0 \in X1) \Rightarrow (v3_ordinal1 X0)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow ((r1_ordinal1 X0 X1) \Leftrightarrow (r1_tarski X0 X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow (v3_ordinal1 (k5_ordinal3 X0 X1)) \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v3_ordinal1 X2) \Rightarrow (((r1_ordinal1 X1 X0) \Rightarrow ((X2 = k5_ordinal3 X0 X1) \Leftrightarrow \\ & (X0 = k10_ordinal2 X1 X2))) \wedge ((\neg r1_ordinal1 X1 X0) \Rightarrow ((X2 = k5_ordinal3 \\ & X0 X1) \Leftrightarrow (X2 = k1_xboole_0)))))) \end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarSKI X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v3_ordinal1 X0)\wedge(v3_ordinal1 X1))\Rightarrow (r1_ordinal1 X0 X1)\vee(r1_ordinal1 X1 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1)\Rightarrow(\neg X1 \in X0) \quad (9)$$

Theorem 1

$$\forall X0.(v3_ordinal1 X0)\Rightarrow(\forall X1.(v3_ordinal1 X1)\Rightarrow(\forall X2.(v3_ordinal1 X2)\Rightarrow((X0 \in X1)\Rightarrow(((\neg r1_ordinal1 X2 X0)\wedge(\neg X2 \in X0))\vee (k5_ordinal3 X0 X2 \in k5_ordinal3 X1 X2))))))$$