t27_ordinal4 (TMFJFZvqF7LYGttzBuQQgnzrjqJTHgcZvFX)

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Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k12\_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_ordinal1 : \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(X0 \in k1\_ordinal1\ X1) \Leftrightarrow ((X0 \in X1) \vee (X0 = X1)) \tag{2}$$

Assume the following.

$$\forall X0.X0 \in k1\_ordinal1\ X0 \tag{3}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow ((k12\_ordinal2\ X0\ np\_\_1 = X0) \wedge (k12\_ordinal2\ np\_\_1\ X0 = np\_\_1)) \tag{4}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow (\forall X2.(v3\_ordinal1\ X2) \Rightarrow (((np\_\_1 \in X0) \wedge (X1 \in X2)) \Rightarrow (k12\_ordinal2\ X0\ X1 \in k12\_ordinal2\ X0\ X2)))) \tag{5}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow ((X0 \in k1\_ordinal1\ X1) \Leftrightarrow (r1\_ordinal1\ X0\ X1))) \tag{6}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow (\neg(r1\_ordinal1\ X0\ np\_\_1) \wedge ((X0 \neq k1\_xboole\_0) \wedge (X0 \neq np\_\_1))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(v3\_ordinal1\ X1)\Rightarrow((X0 \in X1)\Rightarrow(v3\_ordinal1\ X0)) \tag{8}$$

Assume the following.

$$np\_\_1 = k1\_ordinal1\ k1\_xboole\_0 \tag{9}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow((\neg v1\_xboole\_0\ (k1\_ordinal1\ X0))\wedge (v3\_ordinal1\ (k1\_ordinal1\ X0))) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1\ X0)\wedge(v3\_ordinal1\ X1))\Rightarrow(v3\_ordinal1\ (k12\_ordinal2\ X0\ X1)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1\ X0)\wedge(v3\_ordinal1\ X1))\Rightarrow((r1\_ordinal1\ X0\ X1)\vee(r1\_ordinal1\ X1\ X0)) \tag{12}$$

Theorem 1

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow(\forall X1.(v3\_ordinal1\ X1)\Rightarrow(\forall X2. (v3\_ordinal1\ X2)\Rightarrow((r1\_ordinal1\ X1\ X2)\Rightarrow((X0 = k1\_xboole\_0)\vee(r1\_ordinal1 (k12\_ordinal2\ X0\ X1)\ (k12\_ordinal2\ X0\ X2))))))$$