t29_ordinal1 (TM-FrDZGXF256VDng4jpZxdvRZjAaV5RL2qY)

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Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $v4\_ordinal1 : \iota \Rightarrow o$ be given. Let $k1\_ordinal1 : \iota \Rightarrow \iota$ be given. Let $r1\_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_ordinal1 : \iota \Rightarrow o$ be given. Let $r2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v2\_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.X0 \in k1\_ordinal1\ X0 \tag{1}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow ((v4\_ordinal1\ X0) \Leftrightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow ((X1 \in X0) \Rightarrow (k1\_ordinal1\ X1 \in X0)))) \tag{2}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (r1\_ordinal1\ (k1\_ordinal1\ X0)\ X1))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_ordinal1\ X0) \Rightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow ((r2\_xboole\_0\ X0\ X1) \Rightarrow (X0 \in X1))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v3\_ordinal1\ X0) \wedge (v3\_ordinal1\ X1)) \Rightarrow ((r1\_ordinal1\ X0\ X1) \Leftrightarrow (r1\_tarski\ X0\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow ((\neg v1\_xboole\_0\ (k1\_ordinal1\ X0)) \wedge (v3\_ordinal1\ (k1\_ordinal1\ X0))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(r2\_xboole\_0\ X0\ X1) \Leftrightarrow ((r1\_tarski\ X0\ X1) \wedge (X0 \neq X1)) \tag{7}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow ((v1\_ordinal1\ X0) \wedge (v2\_ordinal1\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (\neg X1 \in X0) \tag{9}$$

Theorem 1

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow ((\neg(\neg v4\_ordinal1\ X0) \wedge (\forall X1.\ (v3\_ordinal1\ X1) \Rightarrow (X0 \neq k1\_ordinal1\ X1))) \wedge (\neg(\exists X1.(v3\_ordinal1\ X1) \wedge (X0 = k1\_ordinal1\ X1)) \wedge (v4\_ordinal1\ X0)))$$