

t19_ordinal1 (TMM-
mqzE4ZdeVd8QWk1U1mwmvMcMNxyRNsTU)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\neg (\neg X0 \in X1) \wedge ((X0 \neq X1) \wedge (\neg X1 \in X0)))) \quad (1)$$

Assume the following.

$$\forall X0.(v2_ordinal1 X0) \Leftrightarrow (\forall X1.\forall X2.\neg(X1 \in X0) \wedge ((X2 \in X0) \wedge (\neg X1 \in X2) \wedge ((X1 \neq X2) \wedge (\neg X2 \in X1)))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_ordinal1 X0) \Leftrightarrow (\forall X1.(X1 \in X0) \Rightarrow (r1_tarski X1 X0)) \quad (3)$$

Assume the following.

$$\forall X0.((v1_ordinal1 X0) \wedge (v2_ordinal1 X0)) \Rightarrow (v3_ordinal1 X0) \quad (4)$$

Theorem 1

$$\forall X0.(\forall X1.(X1 \in X0) \Rightarrow ((v3_ordinal1 X1) \wedge (r1_tarski X1 X0))) \Rightarrow (v3_ordinal1 X0)$$