

t10_wellord2
(TMPynDSo3B5Jocjo72BWhrEfhvMWqnzX6dv)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r4_wellord1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_wellord2 : \iota \Rightarrow \iota$ be given. Let $k1_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relat_1 : \iota \Rightarrow \iota$ be given. Let $v2_wellord1 : \iota \Rightarrow o$ be given. Let $k2_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow ((X0 \in X1) \Rightarrow (X0 = k1_wellord1 (k1_wellord2 X1) X0))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1) \Rightarrow (r1_tarski (k1_wellord1 X1 X0) (k1_relat_1 X1)) \quad (2)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(r1_tarski X1 X0) \Rightarrow (v2_wellord1 (k1_wellord2 X1))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Rightarrow (k2_wellord1 (k1_wellord2 X1) X0 = k1_wellord2 X0) \quad (4)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow ((v2_wellord1 X0) \Rightarrow (\forall X1.\neg (X1 \in k1_relat_1 X0) \wedge (r4_wellord1 X0 (k2_wellord1 X0 (k1_wellord1 X0 X1)))))) \quad (5)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow ((r4_wellord1 X0 X1) \Rightarrow (r4_wellord1 X1 X0))) \quad (6)$$

Assume the following.

$$\forall X0.(v3_ordinal1\ X0)\Rightarrow(\forall X1.(v3_ordinal1\ X1)\Rightarrow(\neg(\neg X0 \in X1)\wedge((X0\neq X1)\wedge(\neg X1 \in X0)))) \quad (7)$$

Assume the following.

$$\forall X0.v1_relat_1\ (k1_wellord2\ X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow(X2 \in X1)) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(v1_relat_1\ X1)\Rightarrow((X1 = k1_wellord2\ X0)\Leftrightarrow \\ ((k1_relat_1\ X1 = X0)\wedge(\forall X2.\forall X3.((X2 \in X0)\wedge(X3 \in X0))\Rightarrow \\ ((k4_tarski\ X2\ X3 \in X1)\Leftrightarrow(r1_tarski\ X2\ X3)))))) \end{aligned} \quad (10)$$

Theorem 1

$$\forall X0.(v3_ordinal1\ X0)\Rightarrow(\forall X1.(v3_ordinal1\ X1)\Rightarrow((r4_wellord1\ (k1_wellord2\ X0)\ (k1_wellord2\ X1))\Rightarrow(X0 = X1)))$$