

t24_wellord1
(TMWRamG9Bnh6rrPdHE2adkRJDmfEtgy3FHG)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_wellord1 : \iota \Rightarrow o$ be given. Let $k2_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relat_1 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg(X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (\neg(\neg r1_xboole_0 X0 X1) \wedge (\forall X2. \neg(X2 \in X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2. (X2 \in X0) \wedge (X2 \in X1)) \wedge (r1_xboole_0 X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 X2)\Rightarrow(r1_tarski (k1_wellord1 (k2_wellord1 X2 X0) X1) (k1_wellord1 X2 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1)\Rightarrow((r1_tarski (k1_relat_1 (k2_wellord1 X1 X0)) (k1_relat_1 X1))\wedge(r1_tarski (k1_relat_1 (k2_wellord1 X1 X0)) X0)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X0)\Rightarrow(v1_relat_1 (k2_wellord1 X0 X1)) \quad (9)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow(k1_relat_1 X0 = k2_xboole_0 (k9_xtuple_0 X0) (k10_xtuple_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow((v1_wellord1 X0)\Leftrightarrow(\forall X1.\neg(r1_tarski X1 (k1_relat_1 X0))\wedge((X1\neq k1_xboole_0)\wedge(\forall X2.\neg(X2 \in X1)\wedge(r1_xboole_0 (k1_wellord1 X0 X2) X1)))))) \quad (11)$$

Theorem 1

$$\forall X0.\forall X1.(v1_relat_1 X1)\Rightarrow((v1_wellord1 X1)\Rightarrow(v1_wellord1 (k2_wellord1 X1 X0)))$$