

t47_wellord1

(TMWUhx56vrRroTXwZah5SUJUNYaTjMuiLr)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v2_wellord1 : \iota \Rightarrow o$ be given. Let $k1_relat_1 : \iota \Rightarrow \iota$ be given. Let $r4_wellord1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_relat_2 : \iota \Rightarrow o$ be given. Let $v1_relat_2 : \iota \Rightarrow o$ be given. Let $v4_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $v1_wellord1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow ((v2_wellord1 X0) \Rightarrow (\forall X1. \neg (X1 \in k1_relat_1 X0) \wedge (r4_wellord1 X0 (k2_wellord1 X0 (k1_wellord1 X0 X1)))))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow ((r4_wellord1 X0 X1) \Rightarrow (r4_wellord1 X1 X0))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1.(v1_relat_1 X1) \Rightarrow ((v2_wellord1 X1) \Rightarrow (k1_relat_1 (k2_wellord1 X1 (k1_wellord1 X1 X0)) = k1_wellord1 X1 X0)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2.(v1_relat_1 X2) \Rightarrow (((v2_wellord1 X2) \wedge ((X0 \in k1_relat_1 X2) \wedge (X1 \in k1_relat_1 X2))) \Rightarrow ((k4_tarski X0 X1 \in X2) \Leftrightarrow (r1_tarski (k1_wellord1 X2 X0) (k1_wellord1 X2 X1)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2.(v1_relat_1 X2) \Rightarrow (((v2_wellord1 X2) \wedge (X0 \in k1_wellord1 X2 X1)) \Rightarrow (k1_wellord1 (k2_wellord1 X2 (k1_wellord1 X2 X1)) X0 = k1_wellord1 X2 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1)\Rightarrow((v2_wellord1 X1)\Rightarrow(v2_wellord1 (k2_wellord1 X1 X0))) \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 X2)\Rightarrow(k2_wellord1 (k2_wellord1 X2 X0) X1 = k2_wellord1 (k2_wellord1 X2 X1) X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 X2)\Rightarrow((X0 \in k1_wellord1 X2 X1)\Leftrightarrow((X0 \neq X1) \wedge (k4_tarski X0 X1 \in X2))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 X2)\Rightarrow(k2_wellord1 (k2_wellord1 X2 X0) X1 = k2_wellord1 X2 (k3_xboole_0 X0 X1)) \quad (10)$$

Assume the following.

$$\forall X0 : \iota \Rightarrow o.\forall X1.\exists X2.\forall X3.(X3 \in X2)\Leftrightarrow ((X3 \in X1) \wedge (X0 X3)) \quad (11)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow((v6_relat_2 X0)\Leftrightarrow(\forall X1.\forall X2.\neg(X1 \in k1_relat_1 X0) \wedge ((X2 \in k1_relat_1 X0) \wedge ((X1 \neq X2) \wedge ((\neg k4_tarski X1 X2 \in X0) \wedge (\neg k4_tarski X2 X1 \in X0)))))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X0)\Rightarrow(v1_relat_1 (k2_wellord1 X0 X1)) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v2_wellord1 X0))\Rightarrow((v1_relat_1 X0) \wedge ((v1_relat_2 X0) \wedge ((v4_relat_2 X0) \wedge ((v6_relat_2 X0) \wedge ((v8_relat_2 X0) \wedge (v1_wellord1 X0)))))) \quad (14)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 X2)\Rightarrow(\neg(v2_wellord1 X2) \wedge ((X0 \in k1_relat_1 X2) \wedge ((X1 \in k1_relat_1 X2) \wedge ((X0 \neq X1) \wedge (r4_wellord1 (k2_wellord1 X2 (k1_wellord1 X2 X0)) (k2_wellord1 X2 (k1_wellord1 X2 X1)))))))$$