

t5_wellord1
(TMYyvLpFh8xbaE9FLVGYEaJUcSxKuq5975J)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r2_wellord1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r6_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r8_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_wellord1 : \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow ((X0 \in k1_wellord1 X2 X1) \Leftrightarrow ((X0 \neq X1) \wedge (k4_tarski X0 X1 \in X2))) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r6_relat_2 X0 X1) \Leftrightarrow (\forall X2. \\ \forall X3. \neg(X2 \in X1) \wedge ((X3 \in X1) \wedge ((X2 \neq X3) \wedge ((\neg k4_tarski X2 X3 \in X0) \wedge \\ (\neg k4_tarski X3 X2 \in X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r2_wellord1 X0 X1) \Leftrightarrow (\\ (r1_relat_2 X0 X1) \wedge ((r8_relat_2 X0 X1) \wedge ((r4_relat_2 X0 X1) \wedge ((\\ r6_relat_2 X0 X1) \wedge (r1_wellord1 X0 X1)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r1_wellord1 X0 X1) \Leftrightarrow (\\ \forall X2. \neg(r1_tarski X2 X1) \wedge ((X2 \neq k1_xboole_0) \wedge (\forall X3. \\ \neg(X3 \in X2) \wedge (r1_xboole_0 (k1_wellord1 X0 X3) X2)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r1_relat_2 X0 X1) \Leftrightarrow (\forall X2. \\ (X2 \in X1) \Rightarrow (k4_tarski X2 X2 \in X0))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0. \forall X1.(v1_relat_1 X1) \Rightarrow ((r2_wellord1 X1 X0) \Rightarrow (\\ \forall X2. \neg(r1_tarski X2 X0) \wedge ((X2 \neq k1_xboole_0) \wedge (\forall X3. \\ \neg(X3 \in X2) \wedge (\forall X4.(X4 \in X2) \Rightarrow (k4_tarski X3 X4 \in X1)))))) \end{aligned}$$