

t17_ordinal1

(TMaHih1x1xd5UCGHGS3FN1gRyC5TPXApK9h)

October 27, 2020

Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_ordinal1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 (k2_xboole_0 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (3)$$

Assume the following.

$$\forall X0. (v2_ordinal1 X0) \Leftrightarrow (\forall X1. \forall X2. \neg (X1 \in X0) \wedge ((X2 \in X0) \wedge ((\neg X1 \in X2) \wedge ((X1 \neq X2) \wedge (\neg X2 \in X1)))))) \quad (4)$$

Assume the following.

$$\forall X0. (v1_ordinal1 X0) \Leftrightarrow (\forall X1. (X1 \in X0) \Rightarrow (r1_tarski X1 X0)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (6)$$

Assume the following.

$$\forall X0. k1_ordinal1 X0 = k2_xboole_0 X0 (k1_tarski X0) \quad (7)$$

Assume the following.

$$\forall X0. ((v1_ordinal1 X0) \wedge (v2_ordinal1 X0)) \Rightarrow (v3_ordinal1 X0) \quad (8)$$

Assume the following.

$$\forall X0. (v3_ordinal1 X0) \Rightarrow ((v1_ordinal1 X0) \wedge (v2_ordinal1 X0)) \quad (9)$$

Theorem 1 $\forall X0.(v3_ordinal1\ X0)\Rightarrow(v3_ordinal1\ (k1_ordinal1\ X0)).$