

t16_ordinal2

(TMW_y53RVHQ_{ro}9K89eKk1XsHNHYMavZru2QM)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_ordinal2 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k2_ordinal1 : \iota \Rightarrow \iota$ be given. Let $k1_setfam_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg(X0 \in X1) \wedge (r1_tarski X1 X0) \quad (1)$$

Assume the following.

$$\forall X0. r1_tarski k1_xboole_0 X0 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (v3_ordinal1 X0) \Rightarrow (\forall X1. (\forall X2. (v3_ordinal1 \\ X2) \Rightarrow ((X2 \in X1) \Rightarrow (r1_ordinal1 X0 X2))) \Rightarrow ((k2_ordinal1 X1 = k1_xboole_0) \vee \\ (r1_ordinal1 X0 (k2_ordinal2 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (v3_ordinal1 X0) \Rightarrow (\forall X1. (X0 \in X1) \Rightarrow (r1_ordinal1 (k2_ordinal2 X1) X0)) \quad (4)$$

Assume the following.

$$\forall X0. v3_ordinal1 (k2_ordinal2 X0) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k2_ordinal1 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow ((X2 \in X0) \wedge (v3_ordinal1 X2))) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (7)$$

Assume the following.

$$\forall X0. k2_ordinal2 X0 = k1_setfam_1 (k2_ordinal1 X0) \quad (8)$$

Theorem 1

$$\forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.\forall X2.((X0 \in X1) \wedge (r1_tarski\ X1\ X2)) \Rightarrow (r1_ordinal1\ (k2_ordinal2\ X2)\ (k2_ordinal2\ X1)))$$