

t24_ordinal2
(TMa7ippZghq9SL7WuUgraHjUozsMVhmr5t7)

October 27, 2020

Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_ordinal2 : \iota \Rightarrow \iota$ be given. Let $k3_ordinal2 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_setfam.1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ be given. Let $r1_xboole.0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_xboole.0 : \iota$ be given. Let $k2_ordinal1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (r1_tarski (k1_setfam.1 X1) X0) \quad (1)$$

Assume the following.

$$\forall X0. (\neg v1_xboole.0 X0) \Rightarrow (\exists X1. (X1 \in X0) \wedge (r1_xboole.0 X1 X0)) \quad (2)$$

Assume the following.

$$\forall X0. (v3_ordinal1 X0) \Rightarrow (\forall X1. (X0 \in X1) \Rightarrow (X0 \in k3_ordinal2 X1)) \quad (3)$$

Assume the following.

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

Assume the following.

$$\forall X0. (v3_ordinal1 X0) \Rightarrow (\forall X1. (v3_ordinal1 X1) \Rightarrow ((r1_ordinal1 X0 X1) \vee (X1 \in X0))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow ((r1_ordinal1 X0 X1) \Leftrightarrow (r1_tarski X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0. (v1_xboole.0 X0) \Rightarrow (X0 = k1_xboole.0) \quad (7)$$

Assume the following.

$$\forall X0.v3_ordinal1 (k3_ordinal2 X0) \quad (8)$$

Assume the following.

$$\forall X0.v3_ordinal1 (k2_ordinal2 X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k2_ordinal1 X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow ((X2 \in X0) \wedge (v3_ordinal1 X2))) \quad (10)$$

Assume the following.

$$k1_xboole_0 = the (\lambda X0 : \iota.v1_xboole_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.k2_ordinal2 X0 = k1_setfam_1 (k2_ordinal1 X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((X0 \neq k1_xboole_0) \Rightarrow ((X1 = k1_setfam_1 X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\forall X3.(X3 \in X0) \Rightarrow (X2 \in X3)))))) \wedge ((X0 = k1_xboole_0) \Rightarrow ((X1 = k1_setfam_1 X0) \Leftrightarrow (X1 = k1_xboole_0))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (\neg X1 \in X0) \quad (14)$$

Theorem 1 $\forall X0.r1_ordinal1 (k2_ordinal2 X0) (k3_ordinal2 X0)$.