

t38_classes2 (TMSWaWyJF-
buGY8ZjD8zgTo1B6eiUZ9KYCS1)

October 27, 2020

Let $v2_classes1 : \iota \Rightarrow o$ be given. Let $k4_classes1 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k1_ordinal1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $v1_classes1 : \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(v3_ordinal1 X1) \Rightarrow ((X0 \in k4_classes1 X1) \Leftrightarrow (k9_setfam_1 X0 \in k4_classes1 (k1_ordinal1 X1))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v3_ordinal1 X2) \Rightarrow (((r1_tarski X0 X1) \wedge (X1 \in k4_classes1 X2)) \Rightarrow (X0 \in k4_classes1 X2)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\neg(v2_classes1 X0) \wedge ((r1_tarski X1 (k4_classes1 (k1_card_1 X0))) \wedge (\neg r2_tarski X1 (k4_classes1 (k1_card_1 X0)))) \wedge (\neg X1 \in k4_classes1 (k1_card_1 X0))) \quad (4)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow ((v4_ordinal1 X0) \Rightarrow ((X0 = k1_xboole_0) \vee (\forall X1.(X1 \in k4_classes1 X0) \Leftrightarrow (\exists X2.(v3_ordinal1 X2) \wedge ((X2 \in X0) \wedge (X1 \in k4_classes1 X2)))))) \quad (5)$$

Assume the following.

$$k4_classes1 k1_xboole_0 = k1_xboole_0 \quad (6)$$

Assume the following.

$$\forall X0.(v3_ordinal1\ X0)\Rightarrow((v4_ordinal1\ X0)\Leftrightarrow(\forall X1.(v3_ordinal1\ X1)\Rightarrow((X1 \in X0)\Rightarrow(k1_ordinal1\ X1 \in X0)))) \quad (7)$$

Assume the following.

$$\forall X0.(v2_classes1\ X0)\Rightarrow(v4_ordinal1\ (k1_card_1\ X0)) \quad (8)$$

Assume the following.

$$\forall X0.(v3_ordinal1\ X0)\Rightarrow((\neg v1_xboole_0\ (k1_ordinal1\ X0))\wedge(v3_ordinal1\ (k1_ordinal1\ X0))) \quad (9)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0\ X0)\Rightarrow((\neg v1_xboole_0\ (k1_card_1\ X0))\wedge(v1_card_1\ (k1_card_1\ X0))) \quad (10)$$

Assume the following.

$$v1_xboole_0\ k1_xboole_0 \quad (11)$$

Assume the following.

$$\forall X0.v1_card_1\ (k1_card_1\ X0) \quad (12)$$

Assume the following.

$$\forall X0.(v2_classes1\ X0)\Leftrightarrow((v1_classes1\ X0)\wedge((\forall X1.(X1 \in X0)\Rightarrow(k9_setfam_1\ X1 \in X0))\wedge(\forall X1.\neg(r1_tarski\ X1\ X0)\wedge(\neg r2_tarski\ X1\ X0)\wedge(\neg X1 \in X0)))) \quad (13)$$

Assume the following.

$$\forall X0.k1_ordinal1\ X0 = k2_xboole_0\ X0\ (k1_tarski\ X0) \quad (14)$$

Assume the following.

$$\forall X0.(v1_classes1\ X0)\Leftrightarrow(\forall X1.\forall X2.((X1 \in X0)\wedge(r1_tarski\ X2\ X1))\Rightarrow(X2 \in X0)) \quad (15)$$

Assume the following.

$$\forall X0.(v1_card_1\ X0)\Rightarrow(v3_ordinal1\ X0) \quad (16)$$

Theorem 1

$$\forall X0.(v2_classes1\ X0)\Rightarrow(v2_classes1\ (k4_classes1\ (k1_card_1\ X0)))$$