

t70_card_2

(TMPauhaoPnNt5TJXVcP5iS638FBRCEqivTv)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v4_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k10_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_ordinal1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (k4_card_1 X0 = k1_nat_1 X0 np_1) \quad (1)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (k10_ordinal2 X0 np_1 = k1_ordinal1 X0) \quad (2)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (k10_ordinal2 X0 (k1_ordinal1 X1) = k1_ordinal1 (k10_ordinal2 X0 X1))) \quad (3)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow ((v4_ordinal1 X0) \Leftrightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow ((X1 \in X0) \Rightarrow (k1_ordinal1 X1 \in X0)))) \quad (4)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (k10_ordinal2 X0 k1_xboole_0 = X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (6)$$

Assume the following.

$$m1_subset_1 \ k1_xboole_0 \ k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \ X0) \Rightarrow (k2_xcmplx_0 \ X0 \ k6_numbers = X0) \quad (8)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0 : \iota \Rightarrow o. ((X0 \ k6_numbers) \wedge (\forall X1.(v7_ordinal1 \\ & X1) \Rightarrow ((X0 \ X1) \Rightarrow (X0 \ (k1_nat_1 \ X1 \ np_1)))))) \Rightarrow (\forall X1.(v7_ordinal1 \\ & X1) \Rightarrow (X0 \ X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1. ((\neg v1_xboole_0 \ X0) \wedge ((\neg v1_xboole_0 \ X1) \wedge \\ & (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 \ X0 \ X1) \Leftrightarrow (m1_subset_1 \ X2 \ X1)) \end{aligned} \quad (11)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (12)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1 \ X0) \Rightarrow (k4_card_1 \ X0 = k1_ordinal1 \ X0) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1. ((v7_ordinal1 \ X0) \wedge (m1_subset_1 \ X1 \ k5_numbers)) \Rightarrow \\ & (k1_nat_1 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \end{aligned} \quad (15)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (16)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(m1_subset_1\ X1\ k5_numbers))\Rightarrow (m2_subset_1\ (k1_nat_1\ X0\ X1)\ k1_numbers\ k5_numbers) \quad (18)$$

Assume the following.

$$\forall X0.k1_ordinal1\ X0 = k2_xboole_0\ X0\ (k1_tarski\ X0) \quad (19)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (20)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v3_ordinal1\ X0) \quad (21)$$

Assume the following.

$$\forall X0.((v3_ordinal1\ X0)\wedge(v1_finset_1\ X0))\Rightarrow(v7_ordinal1\ X0) \quad (22)$$

Assume the following.

$$\forall X0.(v3_ordinal1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow (v3_ordinal1\ X1)) \quad (23)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_finset_1\ X0) \quad (24)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(v1_xcmplx_0\ X0) \quad (25)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xreal_0\ X0) \quad (26)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))\Rightarrow(v1_xboole_0\ X1)) \quad (27)$$

Theorem 1

$$\forall X0.(v3_ordinal1\ X0)\Rightarrow((v4_ordinal1\ X0)\Leftrightarrow(\forall X1.(v3_ordinal1\ X1)\Rightarrow(\forall X2.(v7_ordinal1\ X2)\Rightarrow((X1 \in X0)\Rightarrow(k10_ordinal2\ X1\ X2 \in X0))))))$$