

t37_card_1

(TMLc8KkUyUw7U3bLgYGbnEru6EQkKRX6iRk)

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Let $k4_ordinal1 : \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r2_wellord2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v3_ordinal1 X0) \Rightarrow (\forall X1. (v3_ordinal1 X1) \Rightarrow ((r1_ordinal1 X0 X1) \vee (X1 \in X0))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1_ordinal1 X2) \Rightarrow (((X0 \in X1) \wedge (X1 \in X2)) \Rightarrow (X0 \in X2)) \quad (3)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. (v7_ordinal1 X1) \Rightarrow ((r2_wellord2 X0 X1) \Rightarrow (X0 = X1))) \quad (4)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (5)$$

Assume the following.

$$\forall X0. (v1_card_1 X0) \Leftrightarrow (\exists X1. (v3_ordinal1 X1) \wedge ((X0 = X1) \wedge (\forall X2. (v3_ordinal1 X2) \Rightarrow ((r2_wellord2 X2 X1) \Rightarrow (r1_ordinal1 X1 X2))))) \quad (6)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v3_ordinal1\ X0) \quad (8)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1)\Rightarrow(\neg X1 \in X0) \quad (10)$$

Theorem 1 $\forall X0.(X0 \in k4_ordinal1)\Rightarrow(v1_card_1\ X0).$