

t18_card_1
(TMaF8RsJvET5gGj9V5R5FQ8S3D581pxN7Nw)

October 27, 2020

Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_card_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $r2_wellord2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1\ X0\ X1) \quad (2)$$

Assume the following.

$$\forall X0. (v3_ordinal1\ X0) \Rightarrow (\forall X1. (v3_ordinal1\ X1) \Rightarrow ((r1_ordinal1\ X0\ X1) \vee (X1 \in X0))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski\ X0\ X1) \Rightarrow (r1_ordinal1\ (k1_card_1\ X0)\ (k1_card_1\ X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. r2_wellord2\ X0\ X0 \quad (5)$$

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.

$$\forall X0. v1_card_1\ (k2_card_1\ X0) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. (v1_card_1\ X1) \Rightarrow ((X1 = k2_card_1\ X0) \Leftrightarrow ((k1_card_1\ X0 \in X1) \wedge (\forall X2. (v1_card_1\ X2) \Rightarrow ((k1_card_1\ X0 \in X2) \Rightarrow (r1_ordinal1\ X1\ X2)))))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(v1_card_1 X1)\Rightarrow((X1 = k1_card_1 X0)\Leftrightarrow(r2_wellord2 X0 X1)) \quad (9)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v3_ordinal1 X1)) \quad (10)$$

Assume the following.

$$\forall X0.(v1_card_1 X0)\Rightarrow(v3_ordinal1 X0) \quad (11)$$

Theorem 1 $\forall X0.(v3_ordinal1 X0)\Rightarrow(X0 \in k2_card_1 X0)$.