

t6_topgen_4 (TMGWyRczGxJNZA- pzWKY11peLKcL7pTJW6Pn)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v7_topgen_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_tops_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_card_3 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $k4_topgen_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow (r1_ordinal1 X0 X1) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. k1_card_1 (k1_card_1 X0) = k1_card_1 X0 \quad (3)$$

Assume the following.

$$\forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (v1_card_1 (k4_topgen_1 X0)) \quad (4)$$

Assume the following.

$$\forall X0. v1_card_1 (k1_card_1 X0) \quad (5)$$

Assume the following.

$$\forall X0. (v4_card_3 X0) \Leftrightarrow (r1_ordinal1 (k1_card_1 X0) k4_ordinal1) \quad (6)$$

Assume the following.

$$\forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow ((v7_topgen_1 X0) \Leftrightarrow (r1_ordinal1 (k4_topgen_1 X0) k4_ordinal1)) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \Rightarrow (\forall X1. \\ (v1_card_1\ X1) \Rightarrow ((X1 = k4_topgen_1\ X0) \Leftrightarrow ((\exists X2.(m1_subset_1 \\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \wedge ((v1_tops_1\ X2\ X0) \wedge (X1 = k1_card_1 \\ X2))) \wedge (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0 \\ X0))) \Rightarrow ((v1_tops_1\ X2\ X0) \Rightarrow (r1_ordinal1\ X1\ (k1_card_1\ X2))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(v4_card_3\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0)) \Rightarrow (v4_card_3\ X1)) \quad (9)$$

Assume the following.

$$\forall X0.(v1_card_1\ X0) \Rightarrow (v3_ordinal1\ X0) \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0) \wedge ((v2_pre_topc\ X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow ((v7_topgen_1\ X0) \Leftrightarrow (\exists X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ (u1_struct_0\ X0))) \wedge ((v1_tops_1\ X1\ X0) \wedge (v4_card_3\ X1)))) \end{aligned}$$