

t40_topgen_3
(TMGV_{xg}H7MyQeGGvR63JkATHizm9FmqNBTjL)

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Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k6_topgen_3 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_arytm_3 : \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ (\forall X2. ((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 (k6_topgen_3 X0 X1)))))) \Rightarrow ((v4_pre_topc X2 (k6_topgen_3 \\ X0 X1)) \Leftrightarrow (X1 \in X2)))) \quad (3) \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski (k1_tarski X0) X1) \Leftrightarrow (X0 \in X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \quad (6)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_tarski X0) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. (v1_pre_topc (k6_topgen_3 X0 X1)) \wedge ((v2_pre_topc (k6_topgen_3 X0 X1)) \wedge (l1_pre_topc (k6_topgen_3 X0 X1))) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((v1_pre_topc X2) \wedge ((v2_pre_topc \\ X2) \wedge (l1_pre_topc X2))) \Rightarrow ((X2 = k6_topgen_3 X0 X1) \Leftrightarrow ((u1_struct_0 \\ X2 = X0) \wedge (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\ X2)))) \Rightarrow (k2_pre_topc X2 X3 = k14_funcop_1 X3 k11_arytm_3 X3 (k2_xboole_0 \\ X3 (k3_xboole_0 (k1_tarski X1) X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (X1 \in X0) \Rightarrow (((v4_pre_topc (k1_tarski \\ X2) (k6_topgen_3 X0 X1)) \wedge (m1_subset_1 (k1_tarski X2) (k1_zfmisc_1 \\ (u1_struct_0 (k6_topgen_3 X0 X1)))))) \Leftrightarrow (X2 = X1)) \end{aligned}$$