

l51_topgen_1

(TMJ6BhRwBkj4cQJ184KPbM2SkzaBP5bDHbt)

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Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ 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 $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_topgen_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_topgen_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (k2_pre_topc \\ & X0 X1 = k4_subset_1 (u1_struct_0 X0) X1 (k2_topgen_1 X0 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (((v4_pre_topc X1 X0) \Rightarrow (k2_pre_topc X0 X1 = \\ & X1)) \wedge (((v2_pre_topc X0) \wedge (k2_pre_topc X0 X1 = X1)) \Rightarrow (v4_pre_topc \\ & X1 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Rightarrow (k2_xboole_0 X0 X1 = X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 \\ & X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 X0))) \Rightarrow (k4_subset_1 X0 X1 X2 = \\ & k2_xboole_0 X1 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_pre_topc X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k2_topgen_1 X0 X1) (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\ & (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow((v2_topgen_1 \\ & X1\ X0)\Leftrightarrow(r1_tarski\ X1\ (k2_topgen_1\ X0\ X1)))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\ & (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow(((v4_pre_topc \\ & X1\ X0)\wedge(v2_topgen_1\ X1\ X0))\Rightarrow(k2_topgen_1\ X0\ X1 = X1))) \end{aligned}$$