

l11_pre_topc
(TMHV2UAoxNNY179Xmznmc7yzV9zoAmnLeFP)

October 27, 2020

Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

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.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Rightarrow (k3_xboole_0 X0 X1 = X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (\forall X2. \forall X3. (g1_pre_topc X0 X1 = g1_pre_topc X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \quad (6)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(m1_subset_1\ (u1_pre_topc\ X0)\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \quad (7)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(l1_struct_0\ X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_zfmisc_1\ X0)))\Rightarrow((v1_pre_topc\ (g1_pre_topc\ X0\ X1))\wedge(l1_pre_topc\ (g1_pre_topc\ X0\ X1))) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(l1_pre_topc\ X1)\Rightarrow((\\ m1_pre_topc\ X1\ X0)\Leftrightarrow((r1_tarski\ (k2_struct_0\ X1)\ (k2_struct_0 \\ X0))\wedge(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X1)))\Rightarrow \\ ((X2 \in u1_pre_topc\ X1)\Leftrightarrow(\exists X3.(m1_subset_1\ X3\ (k1_zfmisc_1 \\ (u1_struct_0\ X0))))\wedge((X3 \in u1_pre_topc\ X0)\wedge(X2 = k9_subset_1\ (u1_struct_0 \\ X1)\ X3\ (k2_struct_0\ X1)))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(l1_struct_0\ X0)\Rightarrow(k2_struct_0\ X0 = u1_struct_0\ X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0\ X0\ X1 = k3_xboole_0\ X1\ X0 \quad (12)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow((v1_pre_topc\ X0)\Rightarrow(X0 = g1_pre_topc\ (u1_struct_0\ X0)\ (u1_pre_topc\ X0))) \quad (13)$$

Theorem 1

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(m1_pre_topc\ (g1_pre_topc\ (u1_struct_0\ X0)\ (u1_pre_topc\ X0))\ X0)$$