

t80_tops_3

(TMW17TQCRSRLWMRyJWt5CWpiM17WdRZTjjo)

October 27, 2020

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 $g1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tops_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & ((v2_pre_topc X1) \wedge (l1_pre_topc X1)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow (((X2 = X3) \wedge (g1_pre_topc (\\ & u1_struct_0 X0) (u1_pre_topc X0) = g1_pre_topc (u1_struct_0 X1) \\ & (u1_pre_topc X1))) \Rightarrow (k1_tops_1 X0 X2 = k1_tops_1 X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k3_subset_1 X0 (k3_subset_1 X0 X1) = X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (\forall X2. \forall X3. (g1_pre_topc X0 X1 = g1_pre_topc X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \quad (3)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (m1_subset_1 (u1_pre_topc X0) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (m1_subset_1 (k3_subset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((l1_pre_topc\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow(m1_subset_1\ (k2_pre_topc\ X0\ X1)\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \quad (6)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow(k1_tops_1\ X0\ X1 = k3_subset_1\ (u1_struct_0\ X0)\ (k2_pre_topc\ X0\ (k3_subset_1\ (u1_struct_0\ X0)\ X1)))) \quad (7)$$

Theorem 1

$$\forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1.((v2_pre_topc\ X1)\wedge(l1_pre_topc\ X1))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow(\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ X1))))\Rightarrow(((X2 = X3)\wedge(g1_pre_topc\ (u1_struct_0\ X0)\ (u1_pre_topc\ X0) = g1_pre_topc\ (u1_struct_0\ X1)\ (u1_pre_topc\ X1))))\Rightarrow(k2_pre_topc\ X0\ X2 = k2_pre_topc\ X1\ X3))))$$