

t6_topalg_3
(TMYnsuk3eBKQVtAUb94bxftf91yGBKKvX3g)

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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 $g1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $r1_connsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.((v2_pre_topc X1) \wedge (\\ l1_pre_topc X1)) \Rightarrow (\forall X2.((v2_pre_topc X2) \wedge (l1_pre_topc \\ X2)) \Rightarrow ((X1 = g1_pre_topc (u1_struct_0 X2) (u1_pre_topc X2)) \Rightarrow ((\\ m1_pre_topc X1 X0) \Leftrightarrow (m1_pre_topc X2 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ (m1_pre_topc X1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 \\ (u1_struct_0 X1))) \Rightarrow (\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 \\ (u1_struct_0 X1))) \Rightarrow (((X4 = X2) \wedge ((X5 = X3) \wedge (r1_connsp_1 X1 X4 X5))) \Rightarrow \\ (r1_connsp_1 X0 X2 X3)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (m1_pre_topc X0 X0) \quad (3)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (m1_pre_topc (g1_pre_topc (u1_struct_0 X0) (u1_pre_topc X0)) X0) \quad (4)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_pre_topc X1 X0) \Rightarrow (l1_pre_topc X1)) \quad (5)$$

Assume the following.

$$\forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. (m1_pre_topc\ X1\ X0)\Rightarrow(v2_pre_topc\ X1)) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\ & (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow(\forall X2. \\ & (m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow(\forall X3. \\ & (m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ (g1_pre_topc\ (u1_struct_0 \\ & X0)\ (u1_pre_topc\ X0))))))\Rightarrow(\forall X4.(m1_subset_1\ X4\ (k1_zfmisc_1 \\ & (u1_struct_0\ (g1_pre_topc\ (u1_struct_0\ X0)\ (u1_pre_topc\ X0))))))\Rightarrow \\ & (((X1 = X3)\wedge(X2 = X4))\Rightarrow((r1_connsp_1\ X0\ X1\ X2)\Leftrightarrow(r1_connsp_1\ (g1_pre_topc \\ & (u1_struct_0\ X0)\ (u1_pre_topc\ X0))\ X3\ X4)))))) \end{aligned}$$