

t9_topalg_5 (TM- cfvgjZ5aUBxWYcmZWHjCupH1rYNfsw5Zt)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. 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 $m2_connsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k1_tops_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0. \forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ & X0))) \Rightarrow (\forall X2. \forall X3.(g1_pre_topc X0 X1 = g1_pre_topc \\ & X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (m1_subset_1 (u1_pre_topc X0) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1.(((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2. \\ & (m2_connsp_2 X2 X0 X1) \Rightarrow (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((m2_connsp_2 \\ & X2 X0 X1) \Leftrightarrow (r1_tarski X1 (k1_tops_1 X0 X2)))))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\ & X1))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\ & X1))) \Rightarrow (\forall X4.(m2_connsp_2 X4 X0 X2) \Rightarrow (((g1_pre_topc (u1_struct_0 \\ & X0) (u1_pre_topc X0) = g1_pre_topc (u1_struct_0 X1) (u1_pre_topc \\ & X1)) \wedge (X2 = X3)) \Rightarrow (m2_connsp_2 X4 X1 X3)))))) \end{aligned}$$