

t14_tsp_1

(TMKyy1fu3iK8fbEdDh2reMfrT6dMic6DjaB)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_pre_topc : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X1)) \Rightarrow (m1_subset_1 X2 (u1_struct_0 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_pre_topc X1 X0) \Rightarrow (l1_pre_topc X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_pre_topc X1 X0) \Rightarrow \\ & ((v6_pre_topc X1) \Leftrightarrow ((v2_struct_0 X1) \vee (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow (\neg(m1_subset_1 X2 (u1_struct_0 X1)) \wedge ((m1_subset_1 X3 (u1_struct_0 \\ & X1)) \wedge ((X2 \neq X3) \wedge ((\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \Rightarrow (\neg(v4_pre_topc X4 X0) \wedge ((X2 \in X4) \wedge (\neg X3 \in X4)))))) \wedge (\forall X4. \\ & (m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\neg(v4_pre_topc \\ & X4 X0) \wedge ((\neg X2 \in X4) \wedge (X3 \in X4))))))))))))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\forall X2.((\neg v2_struct_0 \\ & X2) \wedge ((v6_pre_topc X2) \wedge (m1_pre_topc X2 X0))) \Rightarrow ((m1_pre_topc X1 \\ & X2) \Rightarrow (v6_pre_topc X1)))) \end{aligned}$$