

t118_tmap_1
(TMc2MTVRP8BjGAD2SMs4qB2sAYtoyiJoTtg)

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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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_borsuk_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tmap_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tsep_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_tsep_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1. ((v1_borsuk_1 X1 X0) \wedge (m1_pre_topc X1 X0)) \Rightarrow \\ (\forall X2. ((v1_borsuk_1 X2 X0) \wedge (m1_pre_topc X2 X0)) \Rightarrow (r4_tsep_1 \\ X0 X1 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\
& X1))) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (\\
& \forall X3.((\neg v2_struct_0 X3) \wedge (m1_pre_topc X3 X0)) \Rightarrow ((r4_tsep_1 \\
& X0 X2 X3) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 \\
& X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (((v1_funct_1 (k2_tmap_1 \\
& X0 X1 X4 (k1_tsep_1 X0 X2 X3))) \wedge ((v1_funct_2 (k2_tmap_1 X0 X1 X4 (\\
& k1_tsep_1 X0 X2 X3)) (u1_struct_0 (k1_tsep_1 X0 X2 X3)) (u1_struct_0 \\
& X1)) \wedge ((v5_pre_topc (k2_tmap_1 X0 X1 X4 (k1_tsep_1 X0 X2 X3)) (k1_tsep_1 \\
& X0 X2 X3) X1) \wedge (m1_subset_1 (k2_tmap_1 X0 X1 X4 (k1_tsep_1 X0 X2 X3)) \\
& (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k1_tsep_1 X0 X2 X3)) (\\
& u1_struct_0 X1)))))) \Leftrightarrow (((v1_funct_1 (k2_tmap_1 X0 X1 X4 X2)) \wedge \\
& ((v1_funct_2 (k2_tmap_1 X0 X1 X4 X2) (u1_struct_0 X2) (u1_struct_0 \\
& X1)) \wedge ((v5_pre_topc (k2_tmap_1 X0 X1 X4 X2) X2 X1) \wedge (m1_subset_1 \\
& (k2_tmap_1 X0 X1 X4 X2) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X2) (u1_struct_0 X1)))))) \wedge ((v1_funct_1 (k2_tmap_1 X0 X1 X4 X3)) \wedge \\
& ((v1_funct_2 (k2_tmap_1 X0 X1 X4 X3) (u1_struct_0 X3) (u1_struct_0 \\
& X1)) \wedge ((v5_pre_topc (k2_tmap_1 X0 X1 X4 X3) X3 X1) \wedge (m1_subset_1 \\
& (k2_tmap_1 X0 X1 X4 X3) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X3) (u1_struct_0 X1)))))))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\
& X1))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 \\
& X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X3.((\neg v2_struct_0 \\
& X3) \wedge ((v1_borsuk_1 X3 X0) \wedge (m1_pre_topc X3 X0))) \Rightarrow (\forall X4.(\\
& (\neg v2_struct_0 X4) \wedge ((v1_borsuk_1 X4 X0) \wedge (m1_pre_topc X4 X0))) \Rightarrow \\
& (((v1_funct_1 (k2_tmap_1 X0 X1 X2 (k1_tsep_1 X0 X3 X4)) \wedge ((v1_funct_2 \\
& (k2_tmap_1 X0 X1 X2 (k1_tsep_1 X0 X3 X4) (u1_struct_0 (k1_tsep_1 \\
& X0 X3 X4)) (u1_struct_0 X1)) \wedge ((v5_pre_topc (k2_tmap_1 X0 X1 X2 (\\
& k1_tsep_1 X0 X3 X4)) (k1_tsep_1 X0 X3 X4) X1) \wedge (m1_subset_1 (k2_tmap_1 \\
& X0 X1 X2 (k1_tsep_1 X0 X3 X4) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& (k1_tsep_1 X0 X3 X4) (u1_struct_0 X1)))))) \Leftrightarrow (((v1_funct_1 (k2_tmap_1 \\
& X0 X1 X2 X3)) \wedge ((v1_funct_2 (k2_tmap_1 X0 X1 X2 X3) (u1_struct_0 X3) \\
& (u1_struct_0 X1)) \wedge ((v5_pre_topc (k2_tmap_1 X0 X1 X2 X3) X3 X1) \wedge \\
& (m1_subset_1 (k2_tmap_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X3) (u1_struct_0 X1)))))) \wedge ((v1_funct_1 (k2_tmap_1 \\
& X0 X1 X2 X4)) \wedge ((v1_funct_2 (k2_tmap_1 X0 X1 X2 X4) (u1_struct_0 X4) \\
& (u1_struct_0 X1)) \wedge ((v5_pre_topc (k2_tmap_1 X0 X1 X2 X4) X4 X1) \wedge \\
& (m1_subset_1 (k2_tmap_1 X0 X1 X2 X4) (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 X4) (u1_struct_0 X1)))))))))
\end{aligned}$$