

t80_tmap_1
(TMZbedyysZauKkmyGceeVwW1VA7zPq733ZV)

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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 $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_tsep_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tmap_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_tmap_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\
& X1))) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (\\
& \forall X3.((\neg v2_struct_0 X3) \wedge (m1_pre_topc X3 X0)) \Rightarrow (\forall X4. \\
& ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 X3) (u1_struct_0 \\
& X1)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X3) (u1_struct_0 X1)))))) \Rightarrow (((v1_tsep_1 X2 X3) \wedge (m1_pre_topc X2 \\
& X3)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X3)) \Rightarrow (\forall X6. \\
& (m1_subset_1 X6 (u1_struct_0 X2)) \Rightarrow ((X5 = X6) \Rightarrow ((r1_tmap_1 X3 X1 \\
& X4 X5) \Leftrightarrow (r1_tmap_1 X2 X1 (k3_tmap_1 X0 X1 X3 X2 X4) X6))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\
& X1))) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (\\
& \forall X3.((\neg v2_struct_0 X3) \wedge (m1_pre_topc X3 X0)) \Rightarrow (\forall X4. \\
& ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (u1_struct_0 X2) (u1_struct_0 \\
& X1)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X2) (u1_struct_0 X1)))))) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 \\
& X2)) \Rightarrow (\forall X6.(m1_subset_1 X6 (u1_struct_0 X3)) \Rightarrow (((X5 = X6) \wedge \\
& ((m1_pre_topc X3 X2) \wedge (r1_tmap_1 X2 X1 X4 X5)) \Rightarrow (r1_tmap_1 X3 X1 \\
& (k3_tmap_1 X0 X1 X2 X3 X4) X6))))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\ & (m1_pre_topc\ X1\ X0)\Rightarrow(\forall X2.(m1_pre_topc\ X2\ X0)\Rightarrow((r1_tarSKI \\ & (u1_struct_0\ X1)\ (u1_struct_0\ X2))\Leftrightarrow(m1_pre_topc\ X1\ X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge((v2_pre_topc\ X0)\wedge(l1_pre_topc \\ & X0)))\Rightarrow(\forall X1.((v1_tsep_1\ X1\ X0)\wedge(m1_pre_topc\ X1\ X0))\Rightarrow(\forall X2. \\ & ((\neg v2_struct_0\ X2)\wedge(m1_pre_topc\ X2\ X0))\Rightarrow((r1_tarSKI\ (u1_struct_0 \\ & X1)\ (u1_struct_0\ X2))\Rightarrow((v1_tsep_1\ X1\ X2)\wedge(m1_pre_topc\ X1\ X2)))))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge((v2_pre_topc\ X0)\wedge(l1_pre_topc \\ & X0)))\Rightarrow(\forall X1.((\neg v2_struct_0\ X1)\wedge((v2_pre_topc\ X1)\wedge(l1_pre_topc \\ & X1))))\Rightarrow(\forall X2.((\neg v2_struct_0\ X2)\wedge(m1_pre_topc\ X2\ X1))\Rightarrow(\\ & \forall X3.((\neg v2_struct_0\ X3)\wedge(m1_pre_topc\ X3\ X1))\Rightarrow(\forall X4. \\ & ((v1_funct_1\ X4)\wedge((v1_funct_2\ X4\ (u1_struct_0\ X3)\ (u1_struct_0 \\ & X0))\wedge(m1_subset_1\ X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0 \\ & X3)\ (u1_struct_0\ X0))))))\Rightarrow((((v1_tsep_1\ X2\ X1)\wedge(m1_pre_topc \\ & X2\ X1))\wedge(m1_pre_topc\ X2\ X3))\Rightarrow(\forall X5.(m1_subset_1\ X5\ (u1_struct_0 \\ & X3))\Rightarrow(\forall X6.(m1_subset_1\ X6\ (u1_struct_0\ X2))\Rightarrow((X5 = X6)\Rightarrow \\ & ((r1_tmap_1\ X3\ X0\ X4\ X5)\Leftrightarrow(r1_tmap_1\ X2\ X0\ (k3_tmap_1\ X1\ X0\ X3\ X2\ X4) \\ & X6)))))))))) \end{aligned}$$