

t57_topalg_1

(TMNdsAFLukWjjTZ4XoqdFwydcby1kp3bnEh)

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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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_borsuk_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_group_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_topalg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_borsuk_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_topalg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $r1_group_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
 & \quad X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
 & \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_borsuk_2 X3 \\
 & \quad X0 X1 X2) \Rightarrow ((r1_borsuk_6 X0 X1 X2) \Rightarrow (\forall X4. ((v1_funct_1 X4) \wedge \\
 & \quad ((v1_funct_2 X4 (u1_struct_0 (k5_topalg_1 X0 X2)) (u1_struct_0 \\
 & \quad (k5_topalg_1 X0 X1)))) \wedge ((v1_group_6 X4 (k5_topalg_1 X0 X2) (k5_topalg_1 \\
 & \quad X0 X1)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
 & \quad (k5_topalg_1 X0 X2)) (u1_struct_0 (k5_topalg_1 X0 X1)))))) \Rightarrow \\
 & \quad ((r2_funct_2 (u1_struct_0 (k5_topalg_1 X0 X2)) (u1_struct_0 (\\
 & \quad k5_topalg_1 X0 X1)) X4 (k6_topalg_1 X0 X1 X2 X3)) \Rightarrow (v3_funct_2 X4 \\
 & \quad (u1_struct_0 (k5_topalg_1 X0 X2)) (u1_struct_0 (k5_topalg_1 X0 \\
 & \quad X1)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_borsuk_2 X3 \\
& X0 X1 X2) \Rightarrow ((r1_borsuk_6 X0 X1 X2) \Rightarrow ((v1_funct_1 (k6_topalg_1 X0 \\
& X1 X2 X3)) \wedge ((v1_funct_2 (k6_topalg_1 X0 X1 X2 X3) (u1_struct_0 (\\
& k5_topalg_1 X0 X2)) (u1_struct_0 (k5_topalg_1 X0 X1))) \wedge ((v1_group_6 \\
& (k6_topalg_1 X0 X1 X2 X3) (k5_topalg_1 X0 X2) (k5_topalg_1 X0 X1)) \wedge \\
& (m1_subset_1 (k6_topalg_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 (k5_topalg_1 X0 X2)) (u1_struct_0 (k5_topalg_1 X0 \\
& X1)))))))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v15_algstr_0 X0) \wedge \\
& ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))))) \wedge ((\neg \\
& v2_struct_0 X1) \wedge ((v15_algstr_0 X1) \wedge ((v2_group_1 X1) \wedge ((v3_group_1 \\
& X1) \wedge (l3_algstr_0 X1)))))) \Rightarrow ((r2_group_6 X0 X1) \Rightarrow (r2_group_6 X1 \\
& X0))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2) \wedge \\
& ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\
& X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (r2_funct_2 X0 X1 X2 X2)
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v15_algstr_0 X0) \wedge \\
& ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))))) \wedge ((\neg \\
& v2_struct_0 X1) \wedge ((v15_algstr_0 X1) \wedge ((v2_group_1 X1) \wedge ((v3_group_1 \\
& X1) \wedge (l3_algstr_0 X1)))))) \Rightarrow ((r2_group_6 X0 X1) \Leftrightarrow (r1_group_6 X0 \\
& X1))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge \\
& (l1_pre_topc X0))) \wedge (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow ((v15_algstr_0 \\
& (k5_topalg_1 X0 X1)) \wedge ((v2_group_1 (k5_topalg_1 X0 X1)) \wedge (v3_group_1 \\
& (k5_topalg_1 X0 X1))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge \\
& (l1_pre_topc X0))) \wedge (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow ((\neg v2_struct_0 \\
& (k5_topalg_1 X0 X1)) \wedge (v15_algstr_0 (k5_topalg_1 X0 X1)))
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1_pre_topc\ X0)\wedge((m1_subset_1\ X1\ (u1_struct_0\ X0))\wedge(m1_subset_1\ X2\ (u1_struct_0\ X0))))\Rightarrow(\exists X3.\ m1_borsuk_2\ X3\ X0\ X1\ X2) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2_struct_0\ X0)\wedge((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0)))\wedge((m1_subset_1\ X1\ (u1_struct_0\ X0))\wedge((m1_subset_1\ X2\ (u1_struct_0\ X0))\wedge(m1_borsuk_2\ X3\ X0\ X1\ X2))))\Rightarrow((v1_funct_1\ (k6_topalg_1\ X0\ X1\ X2\ X3))\wedge((v1_funct_2\ (k6_topalg_1\ X0\ X1\ X2\ X3)\ (u1_struct_0\ (k5_topalg_1\ X0\ X2))\ (u1_struct_0\ (k5_topalg_1\ X0\ X1))))\wedge(m1_subset_1\ (k6_topalg_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ (k5_topalg_1\ X0\ X2))\ (u1_struct_0\ (k5_topalg_1\ X0\ X1)))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0\ X0)\wedge((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0)))\wedge(m1_subset_1\ X1\ (u1_struct_0\ X0)))\Rightarrow((v15_algstr_0\ (k5_topalg_1\ X0\ X1))\wedge(l3_algstr_0\ (k5_topalg_1\ X0\ X1))) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0)\wedge((v2_group_1\ X0)\wedge((v3_group_1\ X0)\wedge(l3_algstr_0\ X0))))\Rightarrow(\forall X1.((\neg v2_struct_0\ X1)\wedge((v2_group_1\ X1)\wedge((v3_group_1\ X1)\wedge(l3_algstr_0\ X1))))\Rightarrow((r1_group_6\ X0\ X1)\Leftrightarrow(\exists X2.((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ (u1_struct_0\ X0)\ (u1_struct_0\ X1))\wedge((v1_group_6\ X2\ X0\ X1)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X1))))))\wedge(v3_funct_2\ X2\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)))))) \quad (11)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0\ X0)\wedge((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0)))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0))\Rightarrow((r1_borsuk_6\ X0\ X1\ X2)\Rightarrow(r2_group_6\ (k5_topalg_1\ X0\ X1)\ (k5_topalg_1\ X0\ X2))))))$$