

t58_topgrp_1

(TMF4WvKxHHZbYJ8f9ZBVvKjJMy3urBaXRX1)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v4_topgrp_1 : \iota \Rightarrow o$ be given. Let $l1_topgrp_1 : \iota \Rightarrow o$ be given. Let $v1_tops_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m3_topgrp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_topgrp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $m2_topgrp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v2_group_1 \\ X0) \wedge ((v3_group_1 X0) \wedge ((v4_topgrp_1 X0) \wedge (l1_topgrp_1 X0)))))) \Rightarrow \\ (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (m3_topgrp_1 (\\ k2_topgrp_1 X0 X1) X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\ X1)))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 \\ X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X3. ((v1_tops_1 \\ X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((v3_tops_2 \\ X2 X0 X1) \Rightarrow (v1_tops_1 (k7_relset_1 (u1_struct_0 X0) (u1_struct_0 \\ X1) X2 X3) X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k7_relset_1 (u1_struct_0 \\ X0) (u1_struct_0 X0) (k2_topgrp_1 X0 X2) X1 = k5_group_2 X0 X2 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(m3_topgrp_1\ X1\ X0)\Leftrightarrow(m2_topgrp_1\ X1\ X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l1_topgrp_1\ X0)\Rightarrow((l3_algstr_0\ X0)\wedge(l1_pre_topc\ X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.(((\neg v2_struct_0\ X0)\wedge(l3_algstr_0\ X0))\wedge \\ &\quad (m1_subset_1\ X1\ (u1_struct_0\ X0)))\Rightarrow((v1_funct_1\ (k2_topgrp_1 \\ &\quad X0\ X1))\wedge((v1_funct_2\ (k2_topgrp_1\ X0\ X1)\ (u1_struct_0\ X0)\ (u1_struct_0 \\ &\quad X0))\wedge(m1_subset_1\ (k2_topgrp_1\ X0\ X1)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ &\quad (u1_struct_0\ X0)\ (u1_struct_0\ X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(m2_topgrp_1\ X1\ X0)\Rightarrow(v3_tops_2\ X1\ X0\ X0)) \quad (7)$$

Theorem 1

$$\begin{aligned} &\forall X0.((\neg v2_struct_0\ X0)\wedge((v2_pre_topc\ X0)\wedge((v2_group_1 \\ &\quad X0)\wedge((v3_group_1\ X0)\wedge((v4_topgrp_1\ X0)\wedge(l1_topgrp_1\ X0))))))\Rightarrow \\ &\quad (\forall X1.((v1_tops_1\ X1\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (\\ &\quad u1_struct_0\ X0))))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (u1_struct_0 \\ &\quad X0))\Rightarrow(v1_tops_1\ (k5_group_2\ X0\ X2\ X1)\ X0))) \end{aligned}$$