

t54_topgrp_1

(TMXBZY1JPVpZGuVgxvRhudTX1g5fbic3n1)

October 27, 2020

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 $v3_topgrp_1 : \iota \Rightarrow o$ be given. Let $l1_topgrp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_connsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_group_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow ((r1_tarski X1 X2) \Leftrightarrow (r1_tarski (k1_group_2 \\ X0 X1) (k1_group_2 X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((m1_connsp_2 \\ X2 X0 X1) \Leftrightarrow (\exists X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\ X0))) \wedge ((v3_pre_topc X3 X0) \wedge ((r1_tarski X3 X2) \wedge (X1 \in X3))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge (\\ v3_group_1 X1) \wedge (l3_algstr_0 X1))) \Rightarrow (\forall X2.(m1_subset_1 \\ X2 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow ((X0 \in k1_group_2 X1 X2) \Leftrightarrow (\exists X3. \\ (m1_subset_1 X3 (u1_struct_0 X1)) \wedge ((X0 = k2_group_1 X1 X3) \wedge (X3 \in \\ X2)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(v2_pre_topc X0)\wedge \\ & ((v2_group_1 X0)\wedge(v3_group_1 X0)\wedge(v3_topgrp_1 X0)\wedge(l1_topgrp_1 \\ & X0))))\wedge(v3_pre_topc X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (\\ & u1_struct_0 X0))))\Rightarrow(v3_pre_topc (k1_group_2 X0 X1) X0) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(v2_pre_topc X0)\wedge \\ & (l1_pre_topc X0))\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(\forall X2. \\ & (m1_connsp_2 X2 X0 X1)\Rightarrow(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(l1_topgrp_1 X0)\Rightarrow((l3_algstr_0 X0)\wedge(l1_pre_topc X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(v2_group_1 X0)\wedge \\ & ((v3_group_1 X0)\wedge(l3_algstr_0 X0))))\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))\Rightarrow(m1_subset_1 (k1_group_2 X0 X1) (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \end{aligned} \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(v2_pre_topc X0)\wedge((v2_group_1 \\ & X0)\wedge(v3_group_1 X0)\wedge(v3_topgrp_1 X0)\wedge(l1_topgrp_1 X0))))\Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_connsp_2 \\ & X2 X0 X1)\Rightarrow(m1_connsp_2 (k1_group_2 X0 X2) X0 (k2_group_1 X0 X1)))) \end{aligned}$$