

t30_topgrp_1 (TMYqpTaDHA- jPE9prTs8bydpVNdLWWQKJ4J9)

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Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m3_topgrp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m2_topgrp_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v3_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m3_topgrp_1 X1 X0) \Leftrightarrow (m2_topgrp_1 X1 X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_pre_topc X0) \wedge ((v1_funct_1 X1) \wedge ((\\ & v1_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 X0)) \wedge ((v3_tops_2 \\ & X1 X0 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0)))))) \Rightarrow ((v1_funct_1 (k2_tops_2 (u1_struct_0 \\ & X0) (u1_struct_0 X0) X1)) \wedge ((v1_funct_2 (k2_tops_2 (u1_struct_0 \\ & X0) (u1_struct_0 X0) X1) (u1_struct_0 X0) (u1_struct_0 X0)) \wedge (v3_tops_2 \\ & (k2_tops_2 (u1_struct_0 X0) (u1_struct_0 X0) X1) X0 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m2_topgrp_1 X1 X0) \Rightarrow \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 \\ & X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow \\ & ((v1_funct_1 (k2_tops_2 X0 X1 X2)) \wedge ((v1_funct_2 (k2_tops_2 X0 \\ & X1 X2) X1 X0) \wedge (m1_subset_1 (k2_tops_2 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X1 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.((v1_funct_1\ X1) \wedge ((\\ v1_funct_2\ X1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)) \wedge (m1_subset_1 \\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)))))) \Rightarrow \\ ((m2_topgrp_1\ X1\ X0) \Leftrightarrow (v3_tops_2\ X1\ X0\ X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m2_topgrp_1\ X1\ X0) \Rightarrow (v3_tops_2\ X1\ X0\ X0)) \quad (6)$$

Theorem 1

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m3_topgrp_1\ X1\ X0) \Rightarrow \\ (m3_topgrp_1\ (k2_tops_2\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)\ X1) \\ X0)) \end{aligned}$$