

t7_pcomps_2
(TMF7kYqPYFVrNPk8ErBkBomsMz2Y7obfcie)

October 27, 2020

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 $v3_pcomps_1 : \iota \Rightarrow o$ be given. Let $v2_pcomps_1 : \iota \Rightarrow o$ 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 $m1_setfam_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_tops_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_setfam_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_pcomps_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ &X0))) \Rightarrow ((v3_pcomps_1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ &(k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg (m1_setfam_1 X1 (u1_struct_0 \\ &X0)) \wedge ((v1_tops_2 X1 X0) \wedge (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ &(k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg (v1_tops_2 X2 X0) \wedge ((m1_setfam_1 \\ &X2 (u1_struct_0 X0)) \wedge (r1_setfam_1 X2 X1) \wedge (v1_pcomps_1 X2 X0)))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (&l1_pre_topc X0) \Rightarrow ((v2_pcomps_1 X0) \Leftrightarrow (\forall X1. (\\ &m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow \\ &(\neg (m1_setfam_1 X1 (u1_struct_0 X0)) \wedge ((v1_tops_2 X1 X0) \wedge (\forall X2. \\ &(m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow \\ &(\neg (v1_tops_2 X2 X0) \wedge ((m1_setfam_1 X2 (u1_struct_0 X0)) \wedge (r1_setfam_1 \\ &X2 X1) \wedge (v1_pcomps_1 X2 X0)))))))))) \end{aligned} \quad (2)$$

Theorem 1

$$\forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow ((v3_pcomps_1 X0) \Rightarrow (v2_pcomps_1 X0))$$