

t19_tops_2
(TMX2c4b1Y3UvyY64V86R74Z5fY5XeHXsDff)

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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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_tops_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (m1_subset_1 (k5_setfam_1 X0 X1) (k1_zfmisc_1 X0)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v3_pre_topc X1 X0) \Leftrightarrow (X1 \in u1_pre_topc X0))) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((v1_tops_2 X1 X0) \Leftrightarrow (\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((X2 \in X1) \Rightarrow (v3_pre_topc \\ X2 X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_pre_topc\ X0) \Rightarrow ((v2_pre_topc\ X0) \Leftrightarrow ((u1_struct_0 \\
& X0 \in u1_pre_topc\ X0) \wedge ((\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\
& (k1_zfmisc_1\ (u1_struct_0\ X0)))) \Rightarrow ((r1_tarski\ X1\ (u1_pre_topc \\
& X0)) \Rightarrow (k5_setfam_1\ (u1_struct_0\ X0)\ X1 \in u1_pre_topc\ X0))) \wedge (\forall X1. \\
& (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \Rightarrow (\forall X2. \\
& (m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \Rightarrow (((X1 \in u1_pre_topc \\
& X0) \wedge (X2 \in u1_pre_topc\ X0)) \Rightarrow (k9_subset_1\ (u1_struct_0\ X0)\ X1\ X2 \in \\
& u1_pre_topc\ X0))))))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \Rightarrow \\
& ((v1_tops_2\ X1\ X0) \Rightarrow (v3_pre_topc\ (k5_setfam_1\ (u1_struct_0\ X0) \\
& X1)\ X0)))
\end{aligned}$$