

t1_pre_topc
(TMEzxxgaJ29eapq3kz1hP9tSTPgwQUnd4ESu)

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Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg(v1_xboole_0 X0) \wedge ((X0 \neq X1) \wedge (v1_xboole_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$k3_tarski k1_xboole_0 = k1_xboole_0 \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (k5_setfam_1 X0 X1 = k3_tarski X1) \quad (4)$$

Assume the following.

$$\forall X0. \exists X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (v1_xboole_0 X1) \quad (5)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (6)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_pre_topc\ X0) \Rightarrow ((v2_pre_topc\ X0) \Leftrightarrow ((u1_struct_0 \\
& X0 \in u1_pre_topc\ X0) \wedge ((\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\
& (k1_zfmisc_1\ (u1_struct_0\ X0)))) \Rightarrow ((r1_tarski\ X1\ (u1_pre_topc \\
& X0)) \Rightarrow (k5_setfam_1\ (u1_struct_0\ X0)\ X1 \in u1_pre_topc\ X0))) \wedge (\forall X1. \\
& (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \Rightarrow (\forall X2. \\
& (m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \Rightarrow (((X1 \in u1_pre_topc \\
& X0) \wedge (X2 \in u1_pre_topc\ X0)) \Rightarrow (k9_subset_1\ (u1_struct_0\ X0)\ X1\ X2 \in \\
& u1_pre_topc\ X0))))))
\end{aligned} \tag{7}$$

Theorem 1

$$\forall X0.((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \Rightarrow (k1_xboole_0 \in u1_pre_topc\ X0)$$