

t2_t_1topsp
(TMTxJNRYVYxfUeK3oxiSchwquzvas43WrhP)

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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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_eqrel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k11_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_tarSKI : \iota \Rightarrow \iota$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_eqrel_1 X1 X0) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X1)) \Rightarrow (k7_subset_1 X0 \\ & (k5_setfam_1 X0 X1) (k3_tarSKI X2) = k5_setfam_1 X0 (k7_subset_1 \\ & (k1_zfmisc_1 X0) X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge (m1_eqrel_1 X1 u1_struct_0 \\ & X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X1)) \Rightarrow ((k3_tarSKI \\ & X2 \in u1_pre_topc X0) \Leftrightarrow (X2 \in u1_pre_topc (k11_borsuk_1 X0 X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X1 (k1_zfmisc_1 \\ & X0)) \Rightarrow (k7_subset_1 X0 X1 X2 = k4_xboole_0 X1 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ & X0))) \Rightarrow (k5_setfam_1 X0 X1 = k3_tarSKI X1) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 \\ & (u1_struct_0 X0)) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.\exists X1.m1_eqrel_1 X1 X0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1_eqrel_1 X1 X0)\Rightarrow(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \quad (7)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(m1_subset_1 (k7_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))\Rightarrow(m1_subset_1 (k5_setfam_1 X0 X1) (k1_zfmisc_1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(((v2_pre_topc X0)\wedge(l1_pre_topc X0))\wedge(m1_eqrel_1 X1 (u1_struct_0 X0)))\Rightarrow((v1_pre_topc (k11_borsuk_1 X0 X1))\wedge((v2_pre_topc (k11_borsuk_1 X0 X1))\wedge(l1_pre_topc (k11_borsuk_1 X0 X1)))) \quad (11)$$

Assume the following.

$$\forall X0.((v2_pre_topc X0)\wedge(l1_pre_topc X0))\Rightarrow(\forall X1.(m1_eqrel_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.((v1_pre_topc X2)\wedge((v2_pre_topc X2)\wedge(l1_pre_topc X2)))\Rightarrow((X2 = k11_borsuk_1 X0 X1)\Leftrightarrow((u1_struct_0 X2 = X1)\wedge(u1_pre_topc X2 = ReplSep (toset (\lambda X3 : \iota.k3_tarski X3 \in u1_pre_topc X0) (\lambda X3 : \iota.X3))))))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))\Rightarrow((m1_eqrel_1 X1 X0)\Leftrightarrow((k5_setfam_1 X0 X1 = X0)\wedge(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0))\Rightarrow((X2 \in X1)\Rightarrow((X2\neq k1_xboole_0)\wedge(\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 X0))\Rightarrow(\neg(X3 \in X1)\wedge((X2\neq X3)\wedge(\neg r1_xboole_0 X2 X3)))))))))) \quad (13)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(k2_struct_0 X0 = u1_struct_0 X0) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ (u1_struct_0\ X0))) \Rightarrow ((v4_pre_topc\ X1\ X0) \Leftrightarrow (v3_pre_topc\ (k7_subset_1 \\ (u1_struct_0\ X0)\ (k2_struct_0\ X0)\ X1)\ X0))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ (u1_struct_0\ X0))) \Rightarrow ((v3_pre_topc\ X1\ X0) \Leftrightarrow (X1 \in u1_pre_topc\ X0))) \end{aligned} \quad (16)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0) \wedge ((v2_pre_topc\ X0) \wedge (l1_pre_topc \\ X0))) \Rightarrow (\forall X1.((\neg v1_xboole_0\ X1) \wedge (m1_eqrel_1\ X1\ (u1_struct_0 \\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0 \\ (k11_borsuk_1\ X0\ X1)))) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1 \\ (u1_struct_0\ X0))) \Rightarrow ((X3 = k3_tarski\ X2) \Rightarrow ((v4_pre_topc\ X2\ (k11_borsuk_1 \\ X0\ X1)) \Leftrightarrow (v4_pre_topc\ X3\ X0)))))) \end{aligned}$$