

t26_pre_topc (TM-
NAAs4m2E5cwtNo7w7EbRwc8PwTzG6ZAbp)

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Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k8_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k8_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Rightarrow (k3_xboole_0 X0 X1 = X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k3_xboole_0 (k3_xboole_0 X0 X1) X2 = k3_xboole_0 X0 (k3_xboole_0 X1 X2) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_pre_topc X1 X0) \Rightarrow \\ (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow \\ ((v4_pre_topc X2 X1) \Leftrightarrow (\exists X3. (m1_subset_1 X3 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \wedge ((v4_pre_topc X3 X0) \wedge (k9_subset_1 (u1_struct_0 \\ X1) X3 (k2_struct_0 X1) = X2)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow (k8_relat_1 X1 X0 = k8_relat_1 X1 (k3_xboole_0 (k10_xtuple_0 X1) X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarSKI X0 X0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (k8_relset_1 X0 X1 X2 X3 = k8_relat_1 X2 X3) \quad (8)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (l1_struct_0 X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (m1_subset_1 (k9_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(l1_pre_topc X1) \Rightarrow (\forall X2. \\ & ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\ & X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X1)))))) \Rightarrow ((v5_pre_topc X2 X0 X1) \Leftrightarrow (\forall X3. \\ & (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow ((v4_pre_topc \\ & X3 X1) \Rightarrow (v4_pre_topc (k8_relset_1 (u1_struct_0 X0) (u1_struct_0 \\ & X1) X2 X3) X0)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow (k2_struct_0 X0 = u1_struct_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1) \Rightarrow ((v5_relat_1 X1 X0) \Leftrightarrow (r1_tarSKI (k10_xtuple_0 X1) X0)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\ & ((v2_pre_topc\ X1)\wedge(l1_pre_topc\ X1))\Rightarrow(\forall X2.((v2_pre_topc \\ & X2)\wedge(l1_pre_topc\ X2))\Rightarrow(\forall X3.((v1_funct_1\ X3)\wedge((v1_funct_2 \\ & X3\ (u1_struct_0\ X0)\ (u1_struct_0\ X2))\wedge(m1_subset_1\ X3\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X2))))))\Rightarrow(((v5_pre_topc \\ & X3\ X0\ X2)\wedge(m1_pre_topc\ X2\ X1))\Rightarrow(\forall X4.((v1_funct_1\ X4)\wedge \\ & (v1_funct_2\ X4\ (u1_struct_0\ X0)\ (u1_struct_0\ X1))\wedge(m1_subset_1 \\ & X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X1))))))\Rightarrow \\ & ((X4 = X3)\Rightarrow(v5_pre_topc\ X4\ X0\ X1)))))) \end{aligned}$$