

t33_tops_2

(TMEiARhb2UnzhshzjHzhuz3xVWv1LMQKGW3Z)

October 27, 2020

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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (u1_struct_0 (k1_pre_topc X0 X1) = X1)) \quad (1)$$

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.

$$\begin{aligned} \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((r1_tarski X1 (k5_setfam_1 (u1_struct_0 X0) X3)) \Rightarrow (r1_tarski (k9_subset_1 (u1_struct_0 X0) X1 X2) (k5_setfam_1 (u1_struct_0 (k1_pre_topc X0 X2)) (k1_tops_2 X0 X2 X3)))))))))) \quad (3) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (k5_setfam_1 X0 X1 = k3_tarski X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))\Rightarrow(m1_subset_1 (k5_setfam_1 X0 X1) (k1_zfmisc_1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1_pre_topc X0)\wedge((m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0))))))\Rightarrow(m1_subset_1 (k1_tops_2 X0 X1 X2) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 (k1_pre_topc X0 X1)))))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(X3 \in X1))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1_tarSKI X0 X1)\wedge(r1_tarSKI X1 X0)) \quad (9)$$

Theorem 1

$$\forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow((r1_tarSKI X1 (k5_setfam_1 (u1_struct_0 X0) X2))\Rightarrow(X1 = k5_setfam_1 (u1_struct_0 (k1_pre_topc X0 X1) (k1_tops_2 X0 X1 X2))))))$$