

t25_tops_1

(TMUo7FSWGvKAsVVf6D48ZwFz8E7RmoJNwcc)

October 27, 2020

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 $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_tops_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg (X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\\ & (X1 \in k1_tops_1 X0 X2) \Leftrightarrow (\exists X3. (m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \wedge ((v3_pre_topc X3 X0) \wedge ((r1_tarski X3 X2) \wedge \\ & (X1 \in X3)))))) \quad (6) \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. (\forall X2. (X2 \in X0) \Leftrightarrow (X2 \in X1)) \Rightarrow (X0 = X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarSKI X0 X0 \quad (8)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.(((v2_pre_topc X0)\wedge(l1_pre_topc X0))\wedge \\ &(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(v3_pre_topc \\ &(k1_tops_1 X0 X1) X0) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} &\forall X0.((v2_pre_topc X0)\wedge(l1_pre_topc X0))\Rightarrow(\forall X1. \\ &(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow((v3_pre_topc \\ &X1 X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow(\exists X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ &(u1_struct_0 X0)))\wedge((v3_pre_topc X3 X0)\wedge((r1_tarSKI X3 X1)\wedge \\ &X2 \in X3)))))) \end{aligned}$$