

t17_tops_2

(TMaM4vd72oHtNPEhKds3wRTt4fq6WDTV97S)

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 $v2_tops_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. r1_tarski (k3_xboole_0 X0 X1) X0 \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (((r1_tarski \\ X1 X2) \wedge (v2_tops_2 X2 X0)) \Rightarrow (v2_tops_2 X1 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (3)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((v2_tops_2 X1 \\ X0) \Rightarrow (v2_tops_2 (k9_subset_1 (k1_zfmisc_1 (u1_struct_0 X0)) X1 \\ X2) X0)))) \end{aligned}$$