

t53_tops_3 (TMKhhbnpF- pHH1DYcfTSTh5vZW9YBSKvETKhS)

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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 $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ 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 $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $l1_struct_0 : \iota \Rightarrow o$ 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.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((r1_tarski X1 X2) \Rightarrow (r1_tarski (k2_pre_topc X0 X1) (k2_pre_topc X0 X2)))))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski (k3_xboole_0 X0 X1) X0 \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_pre_topc X1 X0) \Rightarrow \\ (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow \\ ((X2 = X3) \Rightarrow (k2_pre_topc X1 X3 = k9_subset_1 (u1_struct_0 X1) (k2_pre_topc X0 X2) (k2_struct_0 X1)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0))\Rightarrow(k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (6)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(m1_pre_topc X1 X0)\Rightarrow(l1_pre_topc X1)) \quad (7)$$

Assume the following.

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

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(m1_subset_1 (k2_struct_0 X0) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\Rightarrow(\forall X1.(m1_pre_topc X1 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow(\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X1)))\Rightarrow((r1_tarski X3 X2)\Rightarrow(r1_tarski (k2_pre_topc X1 X3) (k2_pre_topc X0 X2)))))) \end{aligned}$$