

t57_tops_3 (TMZyr-
vofmW6YKh1mD6rhDcWyfMV7s35tQyw)

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

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_pre_topc X1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 \\ & (u1_struct_0 X1)))) \Rightarrow (((v3_pre_topc X2 X0) \wedge (r1_tarski X2 (u1_struct_0 \\ & X1)) \wedge (r1_tarski X3 X2) \wedge (X3 = X4))) \Rightarrow ((v3_pre_topc X4 X1) \Leftrightarrow (v3_pre_topc \\ & X3 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.(m1_pre_topc X1 X0) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow ((r1_tarski X2 X3) \Rightarrow (r1_tarski \\ & (k1_tops_1 X0 X2) (k1_tops_1 X1 X3)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (((v3_pre_topc X1 X0) \wedge (r1_tarski X1 X2)) \Rightarrow \\ & (r1_tarski X1 (k1_tops_1 X0 X2)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarSKI X0 X1)\wedge(r1_tarSKI X1 X2))\Rightarrow(r1_tarSKI X0 X2) \quad (5)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow(r1_tarSKI (k1_tops_1 X0 X1) X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarSKI X0 X0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((v2_pre_topc X0)\wedge(l1_pre_topc X0))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(v3_pre_topc (k1_tops_1 X0 X1) X0) \quad (8)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(m1_pre_topc X1 X0)\Rightarrow(l1_pre_topc X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1_tarSKI X0 X1)\wedge(r1_tarSKI X1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.((v2_pre_topc X0)\wedge(l1_pre_topc X0))\Rightarrow(\forall X1.(m1_pre_topc X1 X0)\Rightarrow(v2_pre_topc X1)) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc X0)))\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge(m1_pre_topc X1 X0))\Rightarrow(\\ & \forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow(\\ & \forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow(\\ & \forall X4.(m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 X1)))\Rightarrow(\\ & ((v3_pre_topc X2 X0)\wedge((r1_tarSKI X2 (u1_struct_0 X1))\wedge((r1_tarSKI X3 X2)\wedge(X3 = X4))))\Rightarrow(k1_tops_1 X0 X3 = k1_tops_1 X1 X4)))))) \end{aligned}$$