

t37_topgen_3 (TM- crZ77yReYdGVoeg2qBMNTyV1PJSeWkHth)

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Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k6_topgen_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k11_arytm_3 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k14_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Rightarrow (k3_xboole_0 X0 X1 = X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k6_domain_1 X0 X1 = k1_tarski X1) \quad (3)$$

Assume the following.

$$k11_arytm_3 = k1_xboole_0 \quad (4)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (v1_pre_topc (k6_topgen_3 X0 X1)) \wedge ((v2_pre_topc (k6_topgen_3 X0 X1)) \wedge (l1_pre_topc (k6_topgen_3 X0 X1))) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (m1_subset_1 (k6_domain_1 X0 X1) (k1_zfmisc_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((X0 = X1)\Rightarrow(k14_funcop_1 X0 X1 X2 X3 = X2))\wedge((X0\neq X1)\Rightarrow(k14_funcop_1 X0 X1 X2 X3 = X3)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_pre_topc X2)\wedge((v2_pre_topc X2)\wedge(l1_pre_topc X2)))\Rightarrow((X2 = k6_topgen_3 X0 X1)\Leftrightarrow((u1_struct_0 X2 = X0)\wedge(\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X2))))\Rightarrow(k2_pre_topc X2 X3 = k14_funcop_1 X3 k11_arytm_3 X3 (k2_xboole_0 X3 (k3_xboole_0 (k1_tarski X1) X0)))))) \quad (9)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(\forall X2.((\neg v1_xboole_0 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k6_topgen_3 X0 X1))))))\Rightarrow(k2_pre_topc (k6_topgen_3 X0 X1) X2 = k2_xboole_0 X2 (k6_domain_1 X0 X1))))$$