

t8_topalg_2 (TMXYRkn- jeWM6WWdqmmUPP8NRR1bvNpbRPkq)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_topalg_2 : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_topalg_2 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k3_topmetr : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v3_topmetr : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v6_xxreal_2 : \iota \Rightarrow o$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$k2_topalg_2 = k3_topmetr \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (k1_rcomp_1 X0 X1 = k1_xxreal_1 X0 X1) \quad (3)$$

Assume the following.

$$(v2_pre_topc k3_topmetr) \wedge (v3_topmetr k3_topmetr) \quad (4)$$

Assume the following.

$$\forall X0.((v3_topmetr X0) \wedge (l1_struct_0 X0)) \Rightarrow (v3_membered (u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.((-v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (-v1_xboole_0 (u1_struct_0 X0)) \quad (6)$$

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.

$$(v2_pre_topc\ k3_topmetr)\wedge(l1_pre_topc\ k3_topmetr) \quad (9)$$

Assume the following.

$$\forall X0.((v3_topmetr\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow((v2_topalg_2\ X0)\Leftrightarrow(v6_xxreal_2\ (k2_struct_0\ X0))) \quad (10)$$

Assume the following.

$$\forall X0.(l1_struct_0\ X0)\Rightarrow(k2_struct_0\ X0 = u1_struct_0\ X0) \quad (11)$$

Assume the following.

$$\forall X0.(v2_membered\ X0)\Rightarrow((v6_xxreal_2\ X0)\Leftrightarrow(\forall X1.(v1_xxreal_0\ X1)\Rightarrow(\forall X2.(v1_xxreal_0\ X2)\Rightarrow(((X1 \in X0)\wedge(X2 \in X0))\Rightarrow(r1_tarski\ (k1_xxreal_1\ X1\ X2\ X0)))))) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(v1_xxreal_0\ X0) \quad (13)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v2_membered\ X0) \quad (14)$$

Assume the following.

$$\forall X0.((v3_topmetr\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1.(m1_pre_topc\ X1\ X0)\Rightarrow(v3_topmetr\ X1)) \quad (15)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \quad (16)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0\ X0)\wedge((v2_topalg_2\ X0)\wedge(m1_pre_topc\ X0\ k2_topalg_2)))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0))\Rightarrow(r1_tarski\ (k1_rcomp_1\ X1\ X2)\ (u1_struct_0\ X0))))$$