

t32_simplex0

(TMacu5xgSZWsci8Bj5srDYR8Cratdhor8Kj)

October 27, 2020

Let $m1_simplex0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_simplex0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_simplex0 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v3_pencil_1 : \iota \Rightarrow o$ be given. Let $k2_xxreal_3 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v3_matroid0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_matroid0 : \iota \Rightarrow o$ be given. Let $v4_matroid0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (r1_xxreal_0 X0 \ k1_xxreal_0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 \ (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 \ X1) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(l1_pre_topc X1) \Rightarrow ((\neg(v3_pencil_1 \\ X1) \wedge (\neg r1_xxreal_0 (k2_xxreal_3 \ np_1) X0)) \Rightarrow ((r1_xxreal_0 (k6_simplex0 \\ X1) X0) \Leftrightarrow ((v3_matroid0 X1) \wedge (\forall X2.((v1_finset_1 X2) \wedge (m1_subset_1 \\ X2 \ (k1_zfmisc_1 (u1_struct_0 X1)))) \Rightarrow ((v3_pre_topc X2 \ X1) \Rightarrow (r1_xxreal_0 \\ (k5_card_1 X2) \ (k1_xxreal_3 X0 \ np_1)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.((v1_finset_1 X1) \wedge (m1_subset_1 X1 \ (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((v3_pre_topc X1 \ X0) \Rightarrow (r1_xxreal_0 (k5_card_1 X1) \ (k1_xxreal_3 (k6_simplex0 X0) \ np_1)))) \quad (4)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(r1_xxreal_0\ (k2_xxreal_3\ np_1)\ (k6_simplex0\ X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarski\ X0\ X1)\wedge(r1_tarski\ X1\ X2))\Rightarrow(r1_tarski\ X0\ X2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1_simplex0\ X1\ X0)\Rightarrow(\exists X2.(m2_simplex0\ X2\ X0\ X1)\wedge((v2_struct_0\ X2)\wedge((v1_pre_topc\ X2)\wedge((v3_pencil_1\ X2)\wedge((v1_matroid0\ X2)\wedge(v3_matroid0\ X2)))))) \quad (7)$$

Assume the following.

$$v1_xxreal_0\ k1_xxreal_0 \quad (8)$$

Assume the following.

$$\forall X0.((v4_matroid0\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow((v1_xxreal_0\ (k6_simplex0\ X0))\wedge(v1_int_1\ (k6_simplex0\ X0))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1_simplex0\ X1\ X0)\Rightarrow(\forall X2.(m2_simplex0\ X2\ X0\ X1)\Rightarrow((v1_matroid0\ X2)\wedge((v3_matroid0\ X2)\wedge(m1_simplex0\ X2\ X0)))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_simplex0\ X1\ X0)\Rightarrow(l1_pre_topc\ X1) \quad (11)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(l1_struct_0\ X0) \quad (12)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(v1_xxreal_0\ (k6_simplex0\ X0)) \quad (13)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow((v3_pencil_1\ X0)\Leftrightarrow(v1_xboole_0\ (u1_pre_topc\ X0))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow(X2 \in X1)) \quad (15)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow (k2_struct_0 X0 = u1_struct_0 X0) \quad (16)$$

Assume the following.

$$k1_xxreal_0 = k1_numbers \quad (17)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v3_pre_topc X1 X0) \Leftrightarrow (X1 \in u1_pre_topc X0))) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.(m1_simplex0 X1 X0) \Rightarrow (\forall X2.((v1_matroid0 X2) \wedge ((v3_matroid0 X2) \wedge (m1_simplex0 X2 X0))) \Rightarrow ((m2_simplex0 X2 X0 X1) \Leftrightarrow ((r1_tarski (k2_struct_0 X2) (k2_struct_0 X1)) \wedge (r1_tarski (u1_pre_topc X2) (u1_pre_topc X1)))))) \quad (19)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (((v4_matroid0 X0) \Rightarrow ((v3_pencil_1 X0) \vee ((X1 = k6_simplex0 X0) \Leftrightarrow ((\forall X2.((v1_finset_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((v3_pre_topc X2 X0) \Rightarrow (r1_xxreal_0 (k5_card_1 X2) (k1_xxreal_3 X1 np_1)))))) \wedge (\exists X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \wedge ((v3_pre_topc X2 X0) \wedge (k1_card_1 X2 = k1_xxreal_3 X1 np_1)))))) \wedge (((v3_pencil_1 X0) \Rightarrow ((X1 = k6_simplex0 X0) \Leftrightarrow (X1 = k2_xxreal_3 np_1))) \wedge (\neg(\neg(\neg v3_pencil_1 X0) \wedge (v4_matroid0 X0)) \wedge ((\neg v3_pencil_1 X0) \wedge (\neg(X1 = k6_simplex0 X0) \Leftrightarrow (X1 = k1_xxreal_0))))))) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.((v3_pencil_1 X1) \wedge (m1_simplex0 X1 X0)) \Rightarrow (\forall X2.(m2_simplex0 X2 X0 X1) \Rightarrow (v3_pencil_1 X2)) \quad (21)$$

Theorem 1

$$\forall X0.\forall X1.(m1_simplex0 X1 X0) \Rightarrow (\forall X2.(m2_simplex0 X2 X0 X1) \Rightarrow (r1_xxreal_0 (k6_simplex0 X2) (k6_simplex0 X1)))$$