

t6_simplex2

(TMau6szxSydu9XeewpBPVX9fnDao22urJoo)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_metric_1 : \iota \Rightarrow o$ be given. Let $l1_metric_1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_simplex0 : \iota \Rightarrow o$ be given. Let $v1_simplex2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v6_tbsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_tbsp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_simplex0 : \iota \Rightarrow \iota$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

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.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge (l1_metric_1 X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((v6_tbsp_1 X1 X0) \wedge (r1_tarski X2 X1)) \Rightarrow (r1_xxreal_0 (k3_tbsp_1 X0 X2) (k3_tbsp_1 X0 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X0 X2)) \Rightarrow (r1_tarski X0 (k3_xboole_0 X1 X2)) \quad (4)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v3_pre_topc X1 X0) \Rightarrow (r1_tarski X1 (k4_simplex0 X0)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarSKI X0 X0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(v1_finset_1 X1) \Rightarrow (v1_finset_1 (k3_xboole_0 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (m1_subset_1 (u1_pre_topc X0) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (m1_subset_1 (k9_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge (l1_metric_1 X0))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k3_tbsp_1 X0 X1) k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow ((v2_simplex0 X0) \Leftrightarrow (v1_finset_1 (k4_simplex0 X0))) \quad (12)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge (l1_metric_1 X0))) \Rightarrow (\forall X1.(l1_pre_topc X1) \Rightarrow ((v1_simplex2 X1 X0) \Leftrightarrow (\exists X2.(v1_xreal_0 X2) \wedge (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((X3 \in u1_pre_topc X1) \Rightarrow ((v6_tbsp_1 X3 X0) \wedge (r1_xreal_0 (k3_tbsp_1 X0 X3) X2))))))) \quad (13)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v3_pre_topc X1 X0) \Leftrightarrow (X1 \in u1_pre_topc X0))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (15)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_finset_1 X1)) \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge (l1_metric_1 X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v1_finset_1 X1) \Rightarrow (v6_tbsp_1 X1 X0))) \quad (18)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge (l1_metric_1 X0))) \Rightarrow (\forall X1.(l1_pre_topc X1) \Rightarrow ((v2_simplex0 X1) \Rightarrow (v1_simplex2 X1 X0)))$$