

l29_simplex0 (TMGwX- AgxBc3s48kFW77mUH45t7USBYzJHVc)

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Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k4_simplex0 : \iota \Rightarrow \iota$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_simplex0 : \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (k5_setfam_1 X0 X1 = k3_tarski X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (l1_pre_topc X1) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow (((v3_pre_topc X2 X1) \wedge (X0 \in X2)) \Rightarrow (X0 \in k4_simplex0 X1))) \quad (3)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (m1_subset_1 (u1_pre_topc X0) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \quad (4)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. (X1 = k3_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (\exists X3. (X2 \in X3) \wedge (X3 \in X0))) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ (u1_struct_0\ X0))) \Rightarrow ((X1 = k4_simplex0\ X0) \Leftrightarrow (\forall X2.(m1_subset_1 \\ X2\ (u1_struct_0\ X0)) \Rightarrow ((X2 \in X1) \Leftrightarrow (v1_simplex0\ X2\ X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0 \\ X0)) \Rightarrow ((v1_simplex0\ X1\ X0) \Leftrightarrow (\exists X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ (u1_struct_0\ X0))) \wedge ((v3_pre_topc\ X2\ X0) \wedge (X1 \in X2)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ (u1_struct_0\ X0))) \Rightarrow ((v3_pre_topc\ X1\ X0) \Leftrightarrow (X1 \in u1_pre_topc\ X0))) \end{aligned} \quad (9)$$

Theorem 1

$$\forall X0.(l1_pre_topc\ X0) \Rightarrow (k4_simplex0\ X0 = k5_setfam_1\ (u1_struct_0\ X0)\ (u1_pre_topc\ X0))$$