

t24_simplex2

(TMGg48qjdonfyUDtFmMF9bfSdYpRK6yDQdf)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_rlaffin1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k3_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_convex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_abian : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r1_abian : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v1_rlaffin1 X1 (k15_euclid \\
 & X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))))) \Rightarrow \\
 & ((k5_card_1 X1 = k3_real_1 X0 np_1) \Rightarrow (\forall X2.((v1_funct_1 \\
 & X2) \wedge ((v1_funct_2 X2 (u1_struct_0 (k1_pre_topc (k15_euclid X0) \\
 & (k3_convex1 (k15_euclid X0) X1))) (u1_struct_0 (k1_pre_topc (\\
 & k15_euclid X0) (k3_convex1 (k15_euclid X0) X1)))) \wedge ((v5_pre_topc \\
 & X2 (k1_pre_topc (k15_euclid X0) (k3_convex1 (k15_euclid X0) X1)) \\
 & (k1_pre_topc (k15_euclid X0) (k3_convex1 (k15_euclid X0) X1))) \wedge \\
 & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k1_pre_topc \\
 & (k15_euclid X0) (k3_convex1 (k15_euclid X0) X1))) (u1_struct_0 \\
 & (k1_pre_topc (k15_euclid X0) (k3_convex1 (k15_euclid X0) X1)))))) \Rightarrow \\
 & (\exists X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid X0))) \wedge (\\
 & (X3 \in k1_relset_1 (u1_struct_0 (k1_pre_topc (k15_euclid X0) (k3_convex1 \\
 & (k15_euclid X0) X1))) X2) \wedge (k1_funct_1 X2 X3 = X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (\\
 & k1_relset_1 X0 X1 = k9_xtuple_0 X1)
 \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_abian X0) \Leftrightarrow (\exists X1.r1_abian X1 X0)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_abian X0 X1) \Leftrightarrow ((X0 \in k9_xtuple_0 X1) \wedge (X0 = k1_funct_1 X1 X0))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v1_rlaffin1 X1 (k15_euclid X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))))) \Rightarrow \\ & ((k5_card_1 X1 = k3_real_1 X0 np_1) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 (k1_pre_topc (k15_euclid X0) (k3_convex1 (k15_euclid X0) X1))) (u1_struct_0 (k1_pre_topc (k15_euclid X0) (k3_convex1 (k15_euclid X0) X1)))) \wedge ((v5_pre_topc X2 (k1_pre_topc (k15_euclid X0) (k3_convex1 (k15_euclid X0) X1)) (k1_pre_topc (k15_euclid X0) (k3_convex1 (k15_euclid X0) X1))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k1_pre_topc (k15_euclid X0) (k3_convex1 (k15_euclid X0) X1))) (u1_struct_0 (k1_pre_topc (k15_euclid X0) (k3_convex1 (k15_euclid X0) X1)))))) \Rightarrow (v2_abian X2)))) \end{aligned}$$