

t20_simplex0 (TMQuQunAiP- wSckH6kk8QT6uRtdGFbawHQTk)

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Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_matroid0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $v2_simplex0 : \iota \Rightarrow o$ be given. Let $k1_simplex0 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_classes1 : \iota \Rightarrow o$ be given. Let $v3_matroid0 : \iota \Rightarrow o$ be given. Let $k1_matroid0 : \iota \Rightarrow \iota$ be given. Let $v5_finset_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. k1_simplex0 (k1_tarski X0) = k9_setfam_1 X0 \quad (1)$$

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.

$$\forall X0. \forall X1. ((r1_tarski X0 X1) \wedge (v1_classes1 X1)) \Rightarrow (r1_tarski (k1_simplex0 X0) X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski (k1_tarski X0) X1) \Leftrightarrow (X0 \in X1) \quad (4)$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (\neg(v1_finset_1 (u1_pre_topc X0)) \wedge ((\neg v2_simplex0 X0) \wedge (v3_matroid0 X0))) \quad (5)$$

Assume the following.

$$\forall X0. k9_setfam_1 X0 = k1_zfmisc_1 X0 \quad (6)$$

Assume the following.

$$\forall X0. (\neg v1_finset_1 X0) \Rightarrow (\neg v1_finset_1 (k1_zfmisc_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.((v1_matroid0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (v1_classes1 (k1_matroid0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow ((v3_matroid0 X0) \Leftrightarrow (v5_finset.1 (k1_matroid0 X0))) \quad (9)$$

Assume the following.

$$\forall X0.(v5_finset.1 X0) \Leftrightarrow (\forall X1.(X1 \in X0) \Rightarrow (v1_finset.1 X1)) \quad (10)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (k1_matroid0 X0 = u1_pre_topc X0) \quad (11)$$

Assume the following.

$$\forall X0.(v1_finset.1 X0) \Rightarrow (\forall X1.(m1_subset.1 X1 (k1_zfmisc.1 X0)) \Rightarrow (v1_finset.1 X1)) \quad (12)$$

Theorem 1

$$\forall X0.(l1_pre_topc X0) \Rightarrow (((v1_matroid0 X0) \wedge (v1_finset.1 (u1_pre_topc X0))) \Rightarrow (v2_simplex0 X0))$$