t3_simplex1 (TMb4G9hJnfoUbB4jaiANQ2W3uZrHZSMGydE)

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Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_matroid0 : \iota \Rightarrow o$ be given. Let $m1\_simplex0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v6\_simplex0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_simplex0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_simplex0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_simplex1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k2\_simplex0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_simplex0 : \iota \Rightarrow \iota$ be given. Let $g1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5\_finset\_1 : \iota \Rightarrow o$ be given. Let $l1\_pre\_topc : \iota \Rightarrow o$ be given. Let $v1\_classes1 : \iota \Rightarrow o$ be given. Let $k1\_matroid0 : \iota \Rightarrow \iota$ be given. Let $v1\_pre\_topc : \iota \Rightarrow o$ be given. Let $v3\_matroid0 : \iota \Rightarrow o$ be given. Let $k2\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_pre\_topc : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ (k1\_tarski\ X0)\ X1) \Leftrightarrow (X0 \in X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X1\ X0)) \Rightarrow (k6\_domain\_1\ X0\ X1 = k1\_tarski\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))) \Rightarrow (k2\_simplex0\ X0\ X1 = k1\_simplex0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))) \Rightarrow (\forall X2.\forall X3.(g1\_pre\_topc\ X0\ X1 = g1\_pre\_topc\ X2\ X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_finset\_1\ X0)\Rightarrow(v5\_finset\_1\ (k1\_tarski\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0\ (k1\_zfmisc\_1\ X0) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_matroid0\ X0)\wedge(l1\_pre\_topc\ X0))\Rightarrow(v1\_classes1\ (k1\_matroid0\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v5\_finset\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))))\Rightarrow((v1\_pre\_topc\ (k5\_simplex0\ X0\ X1))\wedge(v3\_matroid0\ (k5\_simplex0\ X0\ X1))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))\Rightarrow((v1\_pre\_topc\ (k5\_simplex0\ X0\ X1))\wedge((v1\_matroid0\ (k5\_simplex0\ X0\ X1))\wedge(v6\_simplex0\ (k5\_simplex0\ X0\ X1)\ X0))) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_simplex0\ X1\ X0)\Rightarrow(l1\_pre\_topc\ X1) \tag{11}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X1\ X0))\Rightarrow(m1\_subset\_1\ (k6\_domain\_1\ X0\ X1)\ (k1\_zfmisc\_1\ X0)) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))\Rightarrow((v1\_pre\_topc\ (k5\_simplex0\ X0\ X1))\wedge(m1\_simplex0\ (k5\_simplex0\ X0\ X1)\ X0)) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))\Rightarrow((v1\_classes1\ (k2\_simplex0\ X0\ X1))\wedge(m1\_subset\_1\ (k2\_simplex0\ X0\ X1)\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))) \tag{15}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow(k2\_struct\_0\ X0 = u1\_struct\_0\ X0) \tag{16}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v3\_pre\_topc\ X1\ X0)\Leftrightarrow(X1 \in u1\_pre\_topc\ X0))) \tag{17}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow(\forall X1.(m1\_simplex0\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1)))\Rightarrow(k1\_simplex1\ X0\ X1\ X2 = X2))) \tag{18}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_classes1\ X1)\Rightarrow((X1 = k1\_simplex0\ X0)\Leftrightarrow((r1\_tarski\ X0\ X1)\wedge(\forall X2.((r1\_tarski\ X0\ X2)\wedge(v1\_classes1\ X2))\Rightarrow(r1\_tarski\ X1\ X2)))) \tag{19}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(k1\_matroid0\ X0 = u1\_pre\_topc\ X0) \tag{20}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_simplex0\ X1\ X0)\Rightarrow(\forall X2.((v1\_matroid0\ X2)\wedge((v3\_matroid0\ X2)\wedge(m1\_simplex0\ X2\ X0)))\Rightarrow((m2\_simplex0\ X2\ X0\ X1)\Leftrightarrow((r1\_tarski\ (k2\_struct\_0\ X2)\ (k2\_struct\_0\ X1))\wedge(r1\_tarski\ (u1\_pre\_topc\ X2)\ (u1\_pre\_topc\ X1))))) \tag{21}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))\Rightarrow(k5\_simplex0\ X0\ X1 = g1\_pre\_topc\ X0\ (k2\_simplex0\ X0\ X1)) \tag{22}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_simplex0\ X1\ X0)\Rightarrow((v6\_simplex0\ X1\ X0)\Leftrightarrow(k2\_struct\_0\ X1 = X0)) \tag{23}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow((v1\_pre\_topc\ X0)\Rightarrow(X0 = g1\_pre\_topc\ (u1\_struct\_0\ X0)\ (u1\_pre\_topc\ X0))) \tag{24}$$

Theorem 1

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow(\forall X1.((v1\_matroid0\ X1)\wedge(m1\_simplex0\ X1\ (u1\_struct\_0\ X0)))\Rightarrow((v6\_simplex0\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.((v1\_finset\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1))))\Rightarrow((v3\_pre\_topc\ X2\ X1)\Rightarrow(m2\_simplex0\ (k5\_simplex0\ (u1\_struct\_0\ X0)\ (k6\_domain\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))\ (k1\_simplex1\ X0\ X1\ X2)))\ (u1\_struct\_0\ X0)\ X1))))))$$