

t19_simplex1

(TMVkXerFHqh1cmo7S96fh6xG4renEasD6GY)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_pencil_1 : \iota \Rightarrow o$ be given. Let $v1_matroid0 : \iota \Rightarrow o$ be given. Let $v3_matroid0 : \iota \Rightarrow o$ be given. Let $m1_simplex0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_simplex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_simplex1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_simplex1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_rlvect_1 X0)) \Rightarrow (\forall X1. \\ & (m1_simplex0 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_simplex1 X2 \\ & X0 X1) \Rightarrow (k3_simplex1 X0 X1 = k3_simplex1 X0 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7_ordinal1 X0) \wedge (((\neg v2_struct_0 \\ & X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\ & ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 \\ & X1) \wedge ((v8_rlvect_1 X1) \wedge (l1_rlvect_1 X1)))))))))) \wedge ((\neg v3_pencil_1 \\ & X2) \wedge ((v1_matroid0 X2) \wedge ((v3_matroid0 X2) \wedge (m1_simplex0 X2 (u1_struct_0 \\ & X1)))))) \Rightarrow ((\neg v3_pencil_1 (k5_simplex1 X0 X1 X2)) \wedge ((v1_matroid0 \\ & (k5_simplex1 X0 X1 X2)) \wedge ((v3_matroid0 (k5_simplex1 X0 X1 X2)) \wedge \\ & (m1_simplex1 (k5_simplex1 X0 X1 X2) X1 X2)))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\ & X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge \\ & ((v8_rlvect_1 X1) \wedge (l1_rlvect_1 X1)))))))))) \Rightarrow (\forall X2.((\neg \\ & v3_pencil_1 X2) \wedge ((v1_matroid0 X2) \wedge ((v3_matroid0 X2) \wedge (m1_simplex0 \\ & X2 (u1_struct_0 X1)))))) \Rightarrow ((r1_tarski (k3_simplex1 X1 X2) (k2_struct_0 \\ & X2)) \Rightarrow (k3_simplex1 X1 (k5_simplex1 X0 X1 X2) = k3_simplex1 X1 X2))) \end{aligned}$$