

t32_simplex1

(TMcX6fdM6yAL7nhDwBMfzex9eNHbak5Dg98)

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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 $v1_simplex1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k6_simplex0 : \iota \Rightarrow \iota$ be given. Let $k5_simplex1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_simplex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_simplex1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
 & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
 & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
 & X0)))))))))) \Rightarrow (\forall X1. ((\neg v3_pencil_1 X1) \wedge ((v1_matroid0 \\
 & X1) \wedge ((v3_matroid0 X1) \wedge ((v1_simplex1 X1 X0) \wedge (m1_simplex0 X1 (\\
 & u1_struct_0 X0)))))) \Rightarrow ((r1_tarski (k3_simplex1 X0 X1) (k2_struct_0 \\
 & X1)) \Rightarrow (k6_simplex0 X1 = k6_simplex0 (k4_simplex1 X0 X1))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
 & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
 & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
 & X0)))))))))) \Rightarrow (\forall X1. ((\neg v3_pencil_1 X1) \wedge ((v1_matroid0 \\
 & X1) \wedge ((v3_matroid0 X1) \wedge ((v1_simplex1 X1 X0) \wedge (m1_simplex0 X1 (\\
 & u1_struct_0 X0)))))) \Rightarrow ((r1_tarski (k3_simplex1 X0 X1) (k2_struct_0 \\
 & X1)) \Rightarrow (v1_simplex1 (k4_simplex1 X0 X1) X0)))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\ & ((v13_algstr_0\ X1) \wedge ((v2_rlvect_1\ X1) \wedge ((v3_rlvect_1\ X1) \wedge ((v4_rlvect_1 \\ & X1) \wedge ((v5_rlvect_1\ X1) \wedge ((v6_rlvect_1\ X1) \wedge ((v7_rlvect_1\ X1) \wedge \\ & ((v8_rlvect_1\ X1) \wedge (l1_rlvect_1\ X1)))))))))) \Rightarrow (\forall X2.((\\ & \neg v3_pencil_1\ X2) \wedge ((v1_matroid0\ X2) \wedge ((v3_matroid0\ X2) \wedge (m1_simplex0 \\ & X2\ (u1_struct_0\ X1)))))) \Rightarrow ((r1_tarski\ (k3_simplex1\ X1\ X2)\ (k2_struct_0 \\ & X2)) \Rightarrow (k5_simplex1\ (k3_real_1\ X0\ np_1)\ X1\ X2 = k4_simplex1\ X1\ (k5_simplex1 \\ & X0\ X1\ X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\ & ((v13_algstr_0\ X1) \wedge ((v2_rlvect_1\ X1) \wedge ((v3_rlvect_1\ X1) \wedge ((v4_rlvect_1 \\ & X1) \wedge ((v5_rlvect_1\ X1) \wedge ((v6_rlvect_1\ X1) \wedge ((v7_rlvect_1\ X1) \wedge \\ & ((v8_rlvect_1\ X1) \wedge (l1_rlvect_1\ X1)))))))))) \Rightarrow (\forall X2.((\\ & \neg v3_pencil_1\ X2) \wedge ((v1_matroid0\ X2) \wedge ((v3_matroid0\ X2) \wedge (m1_simplex0 \\ & X2\ (u1_struct_0\ X1)))))) \Rightarrow ((r1_tarski\ (k3_simplex1\ X1\ X2)\ (k2_struct_0 \\ & X2)) \Rightarrow (k2_struct_0\ (k5_simplex1\ X0\ X1\ X2) = k2_struct_0\ X2))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0) \wedge ((v13_algstr_0\ X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1\ X0) \wedge ((v4_rlvect_1\ X0) \wedge ((v5_rlvect_1\ X0) \wedge \\ & ((v6_rlvect_1\ X0) \wedge ((v7_rlvect_1\ X0) \wedge ((v8_rlvect_1\ X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.((\neg v3_pencil_1\ X1) \wedge ((v1_matroid0 \\ & X1) \wedge ((v3_matroid0\ X1) \wedge (m1_simplex0\ X1\ (u1_struct_0\ X0)))))) \Rightarrow \\ & ((r1_tarski\ (k3_simplex1\ X0\ X1)\ (k2_struct_0\ X1)) \Rightarrow (k5_simplex1 \\ & k1_xboole_0\ X0\ X1 = X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0) \wedge (l1_rlvect_1\ X0)) \Rightarrow (\forall X1. \\ & (m1_simplex0\ X1\ (u1_struct_0\ X0)) \Rightarrow (\forall X2.(m1_simplex1\ X2 \\ & X0\ X1) \Rightarrow (k3_simplex1\ X0\ X1 = k3_simplex1\ X0\ X2))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\ & ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0 : \iota \Rightarrow o.((X0\ k6_numbers) \wedge (\forall X1.(v7_ordinal1 \\ & X1) \Rightarrow ((X0\ X1) \Rightarrow (X0\ (k1_nat_1\ X1\ np_1)))))) \Rightarrow (\forall X1.(v7_ordinal1 \\ & X1) \Rightarrow (X0\ X1)) \end{aligned} \quad (8)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(m1_subset_1 X1 k1_numbers))\Rightarrow (k3_real_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow (k1_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_rlvect_1 X0))\wedge (m1_simplex0 X1 (u1_struct_0 X0)))\Rightarrow(\forall X2.(m1_simplex1 X2 X0 X1)\Rightarrow(m1_simplex0 X2 (u1_struct_0 X0))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1 X0)\wedge(((\neg v2_struct_0 X1)\wedge((v13_algstr_0 X1)\wedge(v2_rlvect_1 X1)\wedge(v3_rlvect_1 X1)\wedge((v4_rlvect_1 X1)\wedge(v5_rlvect_1 X1)\wedge(v6_rlvect_1 X1)\wedge(v7_rlvect_1 X1)\wedge(v8_rlvect_1 X1)\wedge(l1_rlvect_1 X1))))))\wedge((\neg v3_pencil_1 X2)\wedge((v1_matroid0 X2)\wedge(v3_matroid0 X2)\wedge(m1_simplex0 X2 (u1_struct_0 X1))))))\Rightarrow((\neg v3_pencil_1 (k5_simplex1 X0 X1 X2))\wedge((v1_matroid0 (k5_simplex1 X0 X1 X2))\wedge(v3_matroid0 (k5_simplex1 X0 X1 X2))\wedge(m1_simplex1 (k5_simplex1 X0 X1 X2) X1 X2))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v2_rlvect_1 X0)\wedge(v3_rlvect_1 X0)\wedge(v4_rlvect_1 X0)\wedge(v5_rlvect_1 X0)\wedge(v6_rlvect_1 X0)\wedge(v7_rlvect_1 X0)\wedge(v8_rlvect_1 X0)\wedge(l1_rlvect_1 X0))))))\wedge((\neg v3_pencil_1 X1)\wedge((v1_matroid0 X1)\wedge(v3_matroid0 X1)\wedge(m1_simplex0 X1 (u1_struct_0 X0))))))\Rightarrow((\neg v3_pencil_1 (k4_simplex1 X0 X1))\wedge((v1_matroid0 (k4_simplex1 X0 X1))\wedge(v3_matroid0 (k4_simplex1 X0 X1))\wedge(m1_simplex1 (k4_simplex1 X0 X1) X0 X1))) \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_xreal_0 X0) \quad (15)$$

Theorem 1

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((v13_algstr_0 X1)\wedge(v2_rlvect_1 X1)\wedge(v3_rlvect_1 X1)\wedge(v4_rlvect_1 X1)\wedge(v5_rlvect_1 X1)\wedge(v6_rlvect_1 X1)\wedge(v7_rlvect_1 X1)\wedge(v8_rlvect_1 X1)\wedge(l1_rlvect_1 X1))))))\Rightarrow(\forall X2.((\neg v3_pencil_1 X2)\wedge((v1_matroid0 X2)\wedge(v3_matroid0 X2)\wedge((v1_simplex1 X2 X1)\wedge(m1_simplex0 X2 (u1_struct_0 X1))))))\Rightarrow((r1_tarski (k3_simplex1 X1 X2) (k2_struct_0 X2))\Rightarrow(k6_simplex0 X2 = k6_simplex0 (k5_simplex1 X0 X1 X2))))$$