

t56_simplex0
(TMJjLSwNiqvFyTwhgqxG1BjctnubzcTQuff)

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Let $m1_simplex0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_simplex0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_simplex0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 X2) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (k6_relat_1 X1 (k6_relat_1 X0 X2) = k6_relat_1 X0 X2)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1) \Rightarrow (r1_tarski (k6_relat_1 X0 X1) X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (r1_tarski (k9_xtuple_0 (k6_relat_1 X0 X1)) (k9_xtuple_0 X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_simplex0 X3 X0) \Rightarrow (\forall X4.((v1_relat_1 X4) \wedge (v1_funct_1 X4)) \Rightarrow ((r1_tarski X1 X2) \Rightarrow (m2_simplex0 (k10_simplex0 X0 X3 (k5_relat_1 X4 X1)) X0 (k10_simplex0 X0 X3 (k5_relat_1 X4 X2))))) \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (k5_relat_1 X1 (k9_xtuple_0 X0) = X0))) \quad (5)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.(r1_tarski X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (v1_funct_1 X1))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1_relat_1 X2)\Rightarrow(k5_relat_1 (k6_relat_1 X0 X2) X1 = k6_relat_1 X0 (k5_relat_1 X2 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v1_funct_1 X1))\Rightarrow((v1_relat_1 (k6_relat_1 X0 X1))\wedge(v1_funct_1 (k6_relat_1 X0 X1))) \quad (9)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_simplex0 X3 X0)\Rightarrow (\forall X4.((v1_relat_1 X4)\wedge(v1_funct_1 X4))\Rightarrow((r1_tarski X1 X2)\Rightarrow(m2_simplex0 (k10_simplex0 X0 X3 (k6_relat_1 X1 X4)) X0 (k10_simplex0 X0 X3 (k6_relat_1 X2 X4)))))$$