

t2_scmfsa.i (TM-
TUwBhd1b7KhHhHZWmp5bKBitZNwN8bd5f)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_scmfsa_i : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $np_8 : \iota$ be given. Let $k3_scm_inst : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $np_9 : \iota$ be given. Let $np_12 : \iota$ be given. Let $np_11 : \iota$ be given. Let $np_10 : \iota$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_compos_0 : \iota \Rightarrow o$ be given. Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k7_card_1 : \iota \Rightarrow \iota$ be given. Let $np_13 : \iota$ be given. Let $k2_scm_inst : \iota$ be given. Let $k1_scmfsa_i : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\neg r1_xxreal_0 np_9 np_8 \quad (2)$$

Assume the following.

$$\neg r1_xxreal_0 np_12 np_8 \quad (3)$$

Assume the following.

$$\neg r1_xxreal_0 np_11 np_8 \quad (4)$$

Assume the following.

$$\neg r1_xxreal_0 np_10 np_8 \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. k1_xtuple_0 (k4_tarski X0 X1) = X0 \quad (6)$$

Assume the following.

$$(\neg v1_xboole_0 k2_scmfsa_i) \wedge (v1_compos_0 k2_scmfsa_i) \quad (7)$$

Assume the following.

$$\forall X0.k4_xtuple_0 X0 = k1_xtuple_0 (k1_xtuple_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k3_xtuple_0 X0 X1 X2 = k4_tarski (k4_tarski X0 X1) X2 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_tarski X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \quad (11)$$

Assume the following.

$$\begin{aligned} k2_scmf_sa_i = & k2_xboole_0 (k2_xboole_0 k3_scm_inst (ReplSep4 \\ & (toset (\lambda X0 : \iota.m2_subset_1 X0 k4_ordinal1 (k7_card_1 np_13)))) \\ & (\lambda X0 : \iota.toset (\lambda X1 : \iota.m1_subset_1 X1 k2_scm_inst)) \\ & (\lambda X0 : \iota.\lambda X1 : \iota.toset (\lambda X2 : \iota.m1_subset_1 X2 k2_scm_inst)) \\ & (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.toset (\lambda X3 : \iota.m1_subset_1 \\ & X3 k1_scmf_sa_i)) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \\ & \iota.X0 \in k2_tarski np_9 np_10) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \\ & \iota.\lambda X3 : \iota.k3_xtuple_0 X0 k1_xboole_0 (k11_finseq_1 X1 X3 \\ & X2)))) (ReplSep3 (toset (\lambda X0 : \iota.m2_subset_1 X0 k4_ordinal1 \\ & (k7_card_1 np_13)))) (\lambda X0 : \iota.toset (\lambda X1 : \iota.m1_subset_1 \\ & X1 k2_scm_inst)) (\lambda X0 : \iota.\lambda X1 : \iota.toset (\lambda X2 : \iota. \\ & m1_subset_1 X2 k1_scmf_sa_i)) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \\ & \iota.X0 \in k2_tarski np_11 np_12) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \\ & \iota.k3_xtuple_0 X0 k1_xboole_0 (k10_finseq_1 X1 X2))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (13)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k2_scmf_sa_i) \Rightarrow ((r1_xxreal_0 (k4_xtuple_0 X0) np_8) \Rightarrow (X0 \in k3_scm_inst))$$