

t22_scmfsa10

(TMdEg5nm5ZvKUmbGAEdc647Tv7o7eDKqCop)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_compos_0 : \iota \Rightarrow \iota$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k1_scmfsa_2 : \iota$ be given. Let $np_5 : \iota$ be given. Let $k3_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k2_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_ami_2 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k10_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_compos_0 : \iota \Rightarrow o$ be given. Let $k4_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $v2_compos_0 : \iota \Rightarrow o$ be given. Let $v3_compos_0 : \iota \Rightarrow o$ be given. Let $v5_compos_0 : \iota \Rightarrow o$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_3 : \iota$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (u1_compos_1 k1_scmfsa_2)) \Rightarrow & (\neg(k2_compos_0 \\ & (u1_compos_1 k1_scmfsa_2) X0 = np_5) \wedge (\forall X1.((v1_ami_2 \\ & X1) \wedge (m1_subset_1 X1 (u1_struct_0 k1_scmfsa_2))) \Rightarrow (\forall X2. \\ & ((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\ & (X0 \neq k10_scmfsa_2 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\ (\forall X1.((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\ (k2_compos_0 (u1_compos_1 k1_scmfsa_2) (k10_scmfsa_2 X0 X1) = \\ np_5)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\ (\forall X1.((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\ (k5_xtuple_0 (k10_scmfsa_2 X0 X1) = k1_xboole_0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1.(((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \wedge \\ (m1_subset_1 X1 X0)) \Rightarrow (k2_compos_0 X0 X1 = k4_xtuple_0 X1) \end{aligned} \quad (4)$$

Assume the following.

$$\exists X0.(m1_subset_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge (v1_ami_2 X0) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_compos_1 X0) \Rightarrow & ((v1_compos_0 (u1_compos_1 X0)) \wedge \\ & ((v2_compos_0 (u1_compos_1 X0)) \wedge ((v3_compos_0 (u1_compos_1 \\ & X0)) \wedge (v5_compos_0 (u1_compos_1 X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(l1_extpro_1 X1 X0) \Rightarrow ((l1_memstr_0 X1 X0) \wedge (l1_compos_1 X1)) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \wedge \\ (m1_subset_1 X1 X0)) \Rightarrow (m1_subset_1 (k2_compos_0 X0 X1) (k1_compos_0 \\ X0)) \end{aligned} \quad (8)$$

Assume the following.

$$(v1_extpro_1 k1_scmfsa_2 np_3) \wedge (l1_extpro_1 k1_scmfsa_2 np_3) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 \\ k1_scmfsa_2))) \wedge ((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 \\ k1_scmfsa_2)))) \Rightarrow (m1_subset_1 (k10_scmfsa_2 X0 X1) (u1_compos_1 \\ k1_scmfsa_2)) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.k4_xtuple_0 X0 = k1_xtuple_0 (k1_xtuple_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_compos_0 X0)) \Rightarrow (k3_compos_0 X0 X1 = \text{ReplSep} \\ (\text{toset } (\lambda X2 : \iota.m1_subset_1 X2 X0)) (\lambda X2 : \iota.k2_compos_0 \\ X0 X2 = X1) (\lambda X2 : \iota.k5_xtuple_0 X2))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarSKI X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1_tarSKI X0 X1) \wedge (r1_tarSKI X1 X0)) \quad (15)$$

Assume the following.

$$\forall X0.(v5_compos_0 X0) \Rightarrow (\neg v1_xboole_0 X0) \quad (16)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 (k1_compos_0 (u1_compos_1 k1_scmfSA_2))) \Rightarrow ((X0 = np_5) \Rightarrow (k3_compos_0 (u1_compos_1 k1_scmfSA_2) X0 = k1_tarSKI k1_xboole_0))$$