

t27_scmfsa_2

(TMM647Vnw53VtSL9FeqriZjY8HGNcbCAgog)

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Let $m1_scmfsa_2 : \iota \Rightarrow o$ be given. Let $v1_ami_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_scmfsa_2 : \iota$ be given. Let $k2_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k15_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_10 : \iota$ 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 $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_xboole_0 : \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \wedge \\ & (m1_subset_1 X1 X0)) \Rightarrow (k2_compos_0 X0 X1 = k4_xtuple_0 X1) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. k4_xtuple_0 (k3_xtuple_0 X0 \\ & X1 X2) = X0 \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_compos_1 X0) \Rightarrow ((v1_compos_0 (u1_compos_1 X0)) \wedge \\ & ((v2_compos_0 (u1_compos_1 X0)) \wedge ((v3_compos_0 (u1_compos_1 \\ & X0)) \wedge (v5_compos_0 (u1_compos_1 X0))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (l1_extpro_1 X1 X0) \Rightarrow ((l1_memstr_0 X1 X0) \wedge \\ & (l1_compos_1 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$(v1_extpro_1 k1_scmfsa_2 np_3) \wedge (l1_extpro_1 k1_scmfsa_2 np_3) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v1_ami_2\ X0) \wedge (m1_subset_1 \\ & X0\ (u1_struct_0\ k1_scmfsa_2))) \wedge (((v1_ami_2\ X1) \wedge (m1_subset_1 \\ & X1\ (u1_struct_0\ k1_scmfsa_2))) \wedge (m1_scmfsa_2\ X2))) \Rightarrow (m1_subset_1 \\ & (k15_scmfsa_2\ X0\ X1\ X2)\ (u1_compos_1\ k1_scmfsa_2)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_ami_2\ X0) \wedge (m1_subset_1\ X0\ (u1_struct_0\ k1_scmfsa_2))) \Rightarrow \\ & (\forall X1. ((v1_ami_2\ X1) \wedge (m1_subset_1\ X1\ (u1_struct_0\ k1_scmfsa_2))) \Rightarrow \\ & (\forall X2. (m1_scmfsa_2\ X2) \Rightarrow (k15_scmfsa_2\ X0\ X1\ X2 = k3_xtuple_0 \\ & np_10\ k1_xboole_0\ (k11_finseq_1\ X0\ X2\ X1)))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. (v5_compos_0\ X0) \Rightarrow (\neg v1_xboole_0\ X0) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0. (m1_scmfsa_2\ X0) \Rightarrow (\forall X1. ((v1_ami_2\ X1) \wedge (m1_subset_1 \\ & X1\ (u1_struct_0\ k1_scmfsa_2))) \Rightarrow (\forall X2. ((v1_ami_2\ X2) \wedge (\\ & m1_subset_1\ X2\ (u1_struct_0\ k1_scmfsa_2))) \Rightarrow (k2_compos_0\ (u1_compos_1 \\ & k1_scmfsa_2)\ (k15_scmfsa_2\ X2\ X1\ X0) = np_10))) \end{aligned}$$