

t54_scmfsa_2 (TM-
VArXv9Fqi2Y43LKN213soPH76kEMSPyJQ)

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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 $k1_ami_3 : \iota$ be given. Let $k1_scmfsa_2 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v5_funct_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_3 : \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_ami_3)) \wedge \\ & ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_2 k1_ami_3)) \wedge \\ & (v1_partfun1 X0 (u1_struct_0 k1_ami_3)))))) \Rightarrow (\forall X1.((v1_ami_2 \\ & X1) \wedge (m1_subset_1 X1 (u1_struct_0 k1_ami_3))) \Rightarrow (X1 \in k9_xtuple_0 \\ & X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. \\ & ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 \\ & (k1_funct_4 X2 X1) X0 = k1_funct_1 X1 X0))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 k1_ami_3))) \Rightarrow \\ & (\forall X1.((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\ & (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (u1_struct_0 k1_ami_3)) \wedge \\ & ((v1_funct_1 X2) \wedge ((v5_funct_1 X2 (k2_memstr_0 np_2 k1_ami_3)) \wedge \\ & (v1_partfun1 X2 (u1_struct_0 k1_ami_3)))))) \Rightarrow (\forall X3.((v1_relat_1 \\ & X3) \wedge ((v4_relat_1 X3 (u1_struct_0 k1_scmfsa_2)) \wedge (v1_funct_1 \\ & X3) \wedge ((v5_funct_1 X3 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 \\ & X3 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow (\forall X4.((v1_relat_1 \\ & X4) \wedge ((v4_relat_1 X4 (u1_struct_0 k1_scmfsa_2)) \wedge (v1_funct_1 \\ & X4) \wedge ((v5_funct_1 X4 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 \\ & X4 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow (((X3 = k1_funct_4 X4 X2) \wedge (\\ & X0 = X1)) \Rightarrow (k1_funct_1 X2 X0 = k1_funct_1 X3 X1)))))) \end{aligned}$$