

t3_sfmastr2

(TMGAiDPAs7Z9XzM6iy7vbBkzxRErWfpDKfq)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_scmfsa_2 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ 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 $np_3 : \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $v1_ami_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_afinsq_1 : \iota \Rightarrow o$ be given. Let $r5_scmfsa7b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_scmfsa_m : \iota \Rightarrow \iota$ be given. Let $r6_scmfsa7b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_amistd_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_scmfsa_2 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_scmfsa_m : \iota \Rightarrow o$ be given. Let $k2_sf_mastr : \iota \Rightarrow \iota$ be given. Let $k1_scmfsa6b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r4_scmfsa7b : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_scmfsa_2 : \iota \Rightarrow o$ be given. Let $k18_scmfsa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\ & ((v1_funct_1 X0) \wedge (v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)))))) \Rightarrow \\ & (k1_funct_1 (k1_scmfsa_m X0) (k4_scmfsa_2 k6_numbers) = np_1) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\
& X0 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X0) \wedge (v1_partfun1 \\
& X0 k5_numbers)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v4_relat_1 \\
& X1 (u1_struct_0 k1_scmfsa_2)) \wedge ((v1_funct_1 X1) \wedge ((v5_funct_1 \\
& X1 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 X1 (u1_struct_0 \\
& k1_scmfsa_2)))))) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_relat_1 \\
& X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 \\
& k1_scmfsa_2)) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 X2) \wedge ((v1_afinsq_1 \\
& X2) \wedge (v7_amistd_1 X2 np_3 k1_scmfsa_2))))))) \Rightarrow (\forall X3.(\\
& (v1_ami_2 X3) \wedge (m1_subset_1 X3 (u1_struct_0 k1_scmfsa_2))) \Rightarrow (\\
& (\neg r4_scmfsa7b X2 X3) \Rightarrow (k1_funct_1 (k1_scmfsa6b X2 X1 X0) X3 = k1_funct_1 \\
& (k1_scmfsa_m X1) X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\
& ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\
& (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow ((\forall X1. \\
& ((v1_ami_2 X1) \wedge ((\neg v1_scmfsa_m X1) \wedge (m1_subset_1 X1 (u1_struct_0 \\
& k1_scmfsa_2)))) \Rightarrow (k1_funct_1 (k1_scmfsa_m X0) X1 = k1_funct_1 \\
& X0 X1)) \wedge (\forall X1.(m1_scmfsa_2 X1) \Rightarrow (k18_scmfsa_2 (k1_scmfsa_m \\
& X0) X1 = k18_scmfsa_2 X0 X1)))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\
& ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\
& (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow (\forall X1. \\
& ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 \\
& (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X1) \wedge (v1_partfun1 X1 \\
& k5_numbers)))))) \Rightarrow (\forall X2.((v1_ami_2 X2) \wedge (m1_subset_1 X2 \\
& (u1_struct_0 k1_scmfsa_2))) \Rightarrow (\forall X3.((\neg v1_xboole_0 X3) \wedge \\
& ((v1_relat_1 X3) \wedge ((v4_relat_1 X3 k5_numbers) \wedge ((v5_relat_1 X3 \\
& (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X3) \wedge ((v1_finset_1 \\
& X3) \wedge (v1_afinsq_1 X3)))))) \Rightarrow (((r5_scmfsa7b X3 (k1_scmfsa_m X0) \\
& X1) \wedge (r6_scmfsa7b X3 (k1_scmfsa_m X0) X1)) \Rightarrow ((X2 \in k2_sf_mastr X3) \vee \\
& (k1_funct_1 (k1_scmfsa6b X3 X0 X1) X2 = k1_funct_1 (k1_scmfsa_m \\
& X0) X2))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\
& (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge ((v4_relat_1 \\
& X1 k5_numbers) \wedge ((v5_relat_1 X1 (u1_compos_1 k1_scmfsa_2)) \wedge (\\
& (v1_funct_1 X1) \wedge ((v1_finset_1 X1) \wedge (v1_afinsq_1 X1)))))) \Rightarrow (\\
& \neg(\neg X0 \in k2_sf_mastr X1) \wedge (r4_scmfsa7b X1 X0)))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.((v1_ami_2 X0) \wedge (m1_subset_1 X0 (u1_struct_0 k1_scmfsa_2))) \Rightarrow ((v1_scmfsa_m X0) \Leftrightarrow (X0 = k4_scmfsa_2 k6_numbers)) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\ & ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\ & (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow (\forall X1. \\ & ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 \\ & (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X1) \wedge (v1_partfun1 X1 \\ & k5_numbers)))))) \Rightarrow (\forall X2.((v1_ami_2 X2) \wedge (m1_subset_1 X2 \\ & (u1_struct_0 k1_scmfsa_2))) \Rightarrow (\forall X3.((\neg v1_xboole_0 X3) \wedge \\ & ((v1_relat_1 X3) \wedge ((v4_relat_1 X3 k5_numbers) \wedge ((v5_relat_1 X3 \\ & (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X3) \wedge ((v1_finset_1 \\ & X3) \wedge (v1_afinsq_1 X3)))))) \Rightarrow (\neg(((r5_scmfsa7b X3 (k1_scmfsa_m \\ & X0) X1) \wedge (r6_scmfsa7b X3 (k1_scmfsa_m X0) X1)) \vee (v7_amistd_1 X3 \\ & np_3 k1_scmfsa_2)) \wedge ((\neg(k1_funct_1 X0 (k4_scmfsa_2 k6_numbers) \neq \\ & np_1) \wedge (v1_scmfsa_m X2)) \wedge ((\neg X2 \in k2_sf_mastr X3) \wedge (k1_funct_1 \\ & (k1_scmfsa6b X3 X0 X1) X2 \neq k1_funct_1 X0 X2)))))) \end{aligned}$$