

t1_sfmastr3

(TMMQ6c1XbtnxoKFBZdW9YPt4ymwDMynokTF)

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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 $k1_scmf_sa_2 : \iota$ 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 $v1_ami_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_afinsq_1 : \iota \Rightarrow o$ be given. Let $r5_scmf_sa_7b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_scmf_sa_m : \iota \Rightarrow \iota$ be given. Let $r6_scmf_sa_7b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_scmf_sa_7b : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_scmf_sa_6b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\
 & X0 (u1_compos_1 k1_scmf_sa_2)) \wedge ((v1_funct_1 X0) \wedge (v1_partfun1 \\
 & X0 k5_numbers)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v4_relat_1 \\
 & X1 (u1_struct_0 k1_scmf_sa_2)) \wedge ((v1_funct_1 X1) \wedge ((v5_funct_1 \\
 & X1 (k2_memstr_0 np_3 k1_scmf_sa_2)) \wedge (v1_partfun1 X1 (u1_struct_0 \\
 & k1_scmf_sa_2)))))) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_relat_1 \\
 & X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 \\
 & k1_scmf_sa_2)) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 X2) \wedge (v1_afinsq_1 \\
 & X2)))))) \Rightarrow (\forall X3.((v1_ami_2 X3) \wedge (m1_subset_1 X3 (u1_struct_0 \\
 & k1_scmf_sa_2))) \Rightarrow (\forall X4.(m2_subset_1 X4 k1_numbers k5_numbers) \Rightarrow \\
 & ((r5_scmf_sa_7b X2 (k1_scmf_sa_m X1) X0) \wedge (r6_scmf_sa_7b X2 (k1_scmf_sa_m \\
 & X1) X0)) \Rightarrow ((r4_scmf_sa_7b X2 X3) \vee (k1_funct_1 (k1_scmf_sa_6b X2 X1 X0) \\
 & X3 = k1_funct_1 (k5_extpro_1 np_3 k1_scmf_sa_2 (k1_funct_4 X0 X2) \\
 & (k8_memstr_0 np_3 k1_scmf_sa_2 (k1_scmf_sa_m X1) X4) X3))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\
& ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\
& (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow (\forall X1. \\
& ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 \\
& (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X1) \wedge (v1_partfun1 X1 \\
& k5_numbers)))))) \Rightarrow (\forall X2. ((\neg v1_xboole_0 X2) \wedge ((v1_relat_1 \\
& X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 \\
& k1_scmfsa_2)) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 X2) \wedge (v1_afinsq_1 \\
& X2)))))) \Rightarrow (\forall X3. ((v1_ami_2 X3) \wedge (m1_subset_1 X3 (u1_struct_0 \\
& k1_scmfsa_2))) \Rightarrow ((r5_scmfsa7b X2 X0 X1) \Rightarrow ((r4_scmfsa7b X2 X3) \vee \\
& (\forall X4. (m2_subset_1 X4 k1_numbers k5_numbers) \Rightarrow (k1_funct_1 \\
& (k5_extpro_1 np_3 k1_scmfsa_2 (k1_funct_4 X1 X2) (k8_memstr_0 \\
& np_3 k1_scmfsa_2 X0) X4) X3 = k1_funct_1 X0 X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_3) \wedge (m2_subset_1 np_3 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_3 k5_numbers) \wedge (m1_subset_1 np_3 k1_numbers))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\
& ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\
& (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow ((v1_relat_1 \\
& (k1_scmfsa_m X0)) \wedge ((v4_relat_1 (k1_scmfsa_m X0) (u1_struct_0 \\
& k1_scmfsa_2)) \wedge ((v1_funct_1 (k1_scmfsa_m X0)) \wedge ((v5_funct_1 \\
& (k1_scmfsa_m X0) (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 \\
& (k1_scmfsa_m X0) (u1_struct_0 k1_scmfsa_2))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\
& ((v1_funct_1 X0) \wedge (v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)))))) \Rightarrow \\
& ((v1_relat_1 (k1_scmfsa_m X0)) \wedge ((v4_relat_1 (k1_scmfsa_m X0) \\
& (u1_struct_0 k1_scmfsa_2)) \wedge ((v1_funct_1 (k1_scmfsa_m X0)) \wedge \\
& (v5_funct_1 (k1_scmfsa_m X0) (k2_memstr_0 np_3 k1_scmfsa_2))))))
\end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\ & ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\ & (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow (\forall X1. \\ & ((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\ & (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((\\ & v5_relat_1 X2 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X2) \wedge (\\ & (\neg v1_xboole_0 X2) \wedge ((v1_finset_1 X2) \wedge (v1_afinsq_1 X2)))))) \Rightarrow \\ & (\forall X3.((v1_relat_1 X3) \wedge ((v4_relat_1 X3 k5_numbers) \wedge ((\\ & v5_relat_1 X3 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X3) \wedge (\\ & v1_partfun1 X3 k5_numbers)))))) \Rightarrow (((r5_scmfsa7b X2 (k1_scmfsa_m \\ & X0) X3) \wedge (r6_scmfsa7b X2 (k1_scmfsa_m X0) X3)) \Rightarrow ((r4_scmfsa7b X2 \\ & X1) \vee (k1_funct_1 (k1_scmfsa6b X2 X0 X3) X1 = k1_funct_1 (k1_scmfsa_m \\ & X0) X1)))))) \end{aligned}$$