

t79_scmfsa8c
(TMZe2DAC3XDucvZz9f53DNT53KhmvCgLiFq)

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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 $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $k1_scmfsa_2 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $v1_xboole_0 : \iota \Rightarrow o$ 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 $r6_scmfsa7b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_scmfsa8c : \iota \Rightarrow \iota$ be given. Let $k5_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_scmfsa_2 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_compos_1 :$

$\iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\
& X0 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X0) \wedge (v1_partfun1 \\
& X0 k5_numbers)))))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v4_relat_1 \\
& X1 (u1_struct_0 k1_scmfsa_2)) \wedge ((v1_funct_1 X1) \wedge ((v5_funct_1 \\
& X1 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 X1 (u1_struct_0 \\
& k1_scmfsa_2)))))) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_relat_1 \\
& X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 \\
& k1_scmfsa_2)) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 X2) \wedge (v1_afinsq_1 \\
& X2)))))) \Rightarrow (((r5_scmfsa7b X2 X1 X0) \wedge (r6_scmfsa7b X2 X1 X0)) \Rightarrow ((\\
& k3_extpro_1 np_3 k1_scmfsa_2 (k1_funct_4 X0 (k1_scmfsa8c X2)) \\
& (k5_extpro_1 np_3 k1_scmfsa_2 (k1_funct_4 X0 (k1_scmfsa8c X2)) \\
& (k8_memstr_0 np_3 k1_scmfsa_2 X1) (k8_extpro_1 np_3 k1_scmfsa_2 \\
& (k1_funct_4 X0 X2) (k8_memstr_0 np_3 k1_scmfsa_2 X1))) = k11_scmfsa_2 \\
& k6_numbers) \wedge (\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow \\
& (\neg (r1_xxreal_0 X3 (k8_extpro_1 np_3 k1_scmfsa_2 (k1_funct_4 \\
& X0 X2) (k8_memstr_0 np_3 k1_scmfsa_2 X1))) \wedge (k3_extpro_1 np_3 \\
& k1_scmfsa_2 (k1_funct_4 X0 (k1_scmfsa8c X2)) (k5_extpro_1 np_3 \\
& k1_scmfsa_2 (k1_funct_4 X0 (k1_scmfsa8c X2)) (k8_memstr_0 np_3 \\
& k1_scmfsa_2 X1) X3) = k2_compos_1 k1_scmfsa_2))))))
\end{aligned} \tag{1}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\
& X0 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X0) \wedge (v1_partfun1 \\
& X0 k5_numbers)))))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v4_relat_1 \\
& X1 (u1_struct_0 k1_scmfsa_2)) \wedge ((v1_funct_1 X1) \wedge ((v5_funct_1 \\
& X1 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 X1 (u1_struct_0 \\
& k1_scmfsa_2)))))) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_relat_1 \\
& X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 \\
& k1_scmfsa_2)) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 X2) \wedge (v1_afinsq_1 \\
& X2)))))) \Rightarrow (((r5_scmfsa7b X2 X1 X0) \wedge (r6_scmfsa7b X2 X1 X0)) \Rightarrow (k3_extpro_1 \\
& np_3 k1_scmfsa_2 (k1_funct_4 X0 (k1_scmfsa8c X2)) (k5_extpro_1 \\
& np_3 k1_scmfsa_2 (k1_funct_4 X0 (k1_scmfsa8c X2)) (k8_memstr_0 \\
& np_3 k1_scmfsa_2 X1) (k8_extpro_1 np_3 k1_scmfsa_2 (k1_funct_4 \\
& X0 X2) (k8_memstr_0 np_3 k1_scmfsa_2 X1))) = k11_scmfsa_2 k6_numbers))))
\end{aligned}$$