

t6_sfmastr3

(TMF69RRPpQ6G6vJwQwJCxdPdZUu2Nptu42h)

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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 $m1_scmf_sa_2 : \iota \Rightarrow o$ be given. Let $k18_scmf_sa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_scmf_sa_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funct_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_int_2 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_card_1 : \iota \Rightarrow \iota$ be given. Let $k5_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_numbers : \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_scmf_sa_2 X0) \Rightarrow (\forall X1.((v1_ami_2 X1) \wedge (m1_subset_1 \\
 & \quad X1 (u1_struct_0 k1_scmf_sa_2))) \Rightarrow (\forall X2.((v1_ami_2 X2) \wedge (\\
 & \quad m1_subset_1 X2 (u1_struct_0 k1_scmf_sa_2))) \Rightarrow (\forall X3.((v1_relat_1 \\
 & \quad X3) \wedge ((v4_relat_1 X3 (u1_struct_0 k1_scmf_sa_2)) \wedge ((v1_funct_1 \\
 & \quad X3) \wedge ((v5_funct_1 X3 (k2_memstr_0 np_3 k1_scmf_sa_2)) \wedge (v1_partfun1 \\
 & \quad X3 (u1_struct_0 k1_scmf_sa_2)))))) \Rightarrow ((k1_funct_1 (k2_extpro_1 \\
 & \quad np_3 k1_scmf_sa_2 (k15_scmf_sa_2 X2 X1 X0) X3) (k4_struct_0 k1_scmf_sa_2) = \\
 & \quad k4_card_1 (k5_memstr_0 np_3 k1_scmf_sa_2 X3)) \wedge ((\exists X4.(\\
 & \quad m1_subset_1 X4 k5_numbers) \wedge ((X4 = k1_int_2 (k1_funct_1 X3 X1)) \wedge \\
 & \quad (k18_scmf_sa_2 (k2_extpro_1 np_3 k1_scmf_sa_2 (k15_scmf_sa_2 X2 \\
 & \quad X1 X0) X3) X0 = k2_funct_7 (k18_scmf_sa_2 X3 X0) X4 (k1_funct_1 X3 X2)))))) \wedge \\
 & \quad ((\forall X4.((v1_ami_2 X4) \wedge (m1_subset_1 X4 (u1_struct_0 k1_scmf_sa_2))) \Rightarrow \\
 & \quad (k1_funct_1 (k2_extpro_1 np_3 k1_scmf_sa_2 (k15_scmf_sa_2 X2 X1 \\
 & \quad X0) X3) X4 = k1_funct_1 X3 X4)) \wedge (\forall X4.(m1_scmf_sa_2 X4) \Rightarrow ((\\
 & \quad X4 \neq X0) \Rightarrow (r2_relset_1 k5_numbers k4_numbers (k18_scmf_sa_2 (k2_extpro_1 \\
 & \quad np_3 k1_scmf_sa_2 (k15_scmf_sa_2 X2 X1 X0) X3) X4) (k18_scmf_sa_2 \\
 & \quad X3 X4))))))))))
 \end{aligned}$$

(1)

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\ & ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\ & (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow (\forall X1. \\ & ((v1_ami_2 X1) \wedge (m1_subset_1 X1 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\ & (\forall X2.((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\ & (\forall X3.(m1_scmfsa_2 X3) \Rightarrow (k18_scmfsa_2 (k2_extpro_1 np_3 \\ & k1_scmfsa_2 (k15_scmfsa_2 X2 X1 X3) X0) X3 = k2_funct_7 (k18_scmfsa_2 \\ & X0 X3) (k1_int_2 (k1_funct_1 X0 X1)) (k1_funct_1 X0 X2)))))) \end{aligned}$$