

t33_scmbsort

(TMdZGCERFFYVTs8m7aZqUtiFfNNzyAJ2zEe)

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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 $k1_scmf_sa_2 : \iota$ 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 $m1_scmf_sa_2 : \iota \Rightarrow o$ be given. Let $k18_scmf_sa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_scmf_sa_m : \iota \Rightarrow \iota$ be given. Let $k1_scmf_sa6b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\
 & X0 (u1_compos_1 k1_scmf_sa_2)) \wedge ((\neg v1_xboole_0 X0) \wedge ((v1_funct_1 \\
 & X0) \wedge ((v1_finset_1 X0) \wedge (v1_afinsq_1 X0)))))) \Rightarrow (\forall X1. (\\
 & (v1_relat_1 X1) \wedge ((v4_relat_1 X1 (u1_struct_0 k1_scmf_sa_2)) \wedge \\
 & ((v1_funct_1 X1) \wedge ((v5_funct_1 X1 (k2_memstr_0 np_3 k1_scmf_sa_2)) \wedge \\
 & (v1_partfun1 X1 (u1_struct_0 k1_scmf_sa_2)))))) \Rightarrow (\forall X2. \\
 & ((v1_relat_1 X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 \\
 & (u1_compos_1 k1_scmf_sa_2)) \wedge ((v1_funct_1 X2) \wedge (v1_partfun1 X2 \\
 & k5_numbers)))))) \Rightarrow (k1_scmf_sa6b X0 X1 X2 = k6_extpro_1 np_3 k1_scmf_sa_2 \\
 & (k1_funct_4 X2 X0) (k1_scmf_sa_m X1)))
 \end{aligned}
 \tag{1}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v5_relat_1 \\ & X0 (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X0) \wedge (v1_partfun1 \\ & X0 k5_numbers)))))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v4_relat_1 \\ & X1 (u1_struct_0 k1_scmfsa_2)) \wedge ((v1_funct_1 X1) \wedge ((v5_funct_1 \\ & X1 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 X1 (u1_struct_0 \\ & k1_scmfsa_2)))))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 \\ & X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 k1_scmfsa_2)) \wedge (\\ & (v1_funct_1 X2) \wedge ((\neg v1_xboole_0 X2) \wedge ((v1_finset_1 X2) \wedge (v1_afinsq_1 \\ & X2)))))) \Rightarrow (\forall X3.(m1_scmfsa_2 X3) \Rightarrow (k18_scmfsa_2 (k6_extpro_1 \\ & np_3 k1_scmfsa_2 (k1_funct_4 X0 X2) (k1_scmfsa_m X1)) X3 = k18_scmfsa_2 \\ & (k1_scmfsa6b X2 X1 X0) X3)))) \end{aligned}$$