

t4_scpisort

(TMQg6p5Ugv4a2oHvp7rfNNKxHkYEbPU9bB9)

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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 $k1_scmpds_2 : \iota$ 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 $np_2 : \iota$ 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 $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_setfam_1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmpds_2)) \wedge \\
 & ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge \\
 & (v1_partfun1 X0 (u1_struct_0 k1_scmpds_2)))))) \Rightarrow (\forall X1. \\
 & ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 (u1_struct_0 k1_scmpds_2)) \wedge \\
 & ((v1_funct_1 X1) \wedge ((v5_funct_1 X1 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge \\
 & (v1_partfun1 X1 (u1_struct_0 k1_scmpds_2)))))) \Rightarrow (\forall X2. \\
 & ((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 k1_scmpds_2))) \Rightarrow \\
 & (k1_funct_1 X0 X2 = k1_funct_1 X1 X2)) \Leftrightarrow (k6_memstr_0 np_2 k1_scmpds_2 \\
 & X0 = k6_memstr_0 np_2 k1_scmpds_2 X1))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\
& (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (u1_struct_0 X1)) \wedge \\
& ((v1_funct_1 X2) \wedge ((v5_funct_1 X2 (k2_memstr_0 X0 X1)) \wedge (v1_partfun1 \\
& X2 (u1_struct_0 X1)))))) \Rightarrow (\forall X3.((v1_relat_1 X3) \wedge ((v4_relat_1 \\
& X3 (u1_struct_0 X1)) \wedge ((v1_funct_1 X3) \wedge ((v5_funct_1 X3 (k2_memstr_0 \\
& X0 X1)) \wedge (v1_partfun1 X3 (u1_struct_0 X1)))))) \Rightarrow ((k6_memstr_0 \\
& X0 X1 X2 = k6_memstr_0 X0 X1 X3) \Rightarrow (k8_memstr_0 X0 X1 X2 = k8_memstr_0 \\
& X0 X1 X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& ((v2_xreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers))
\end{aligned} \tag{3}$$

Assume the following.

$$\neg v1_xboole_0 np_2 \tag{4}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{5}$$

Assume the following.

$$\begin{aligned}
& (v2_memstr_0 k1_scmpds_2 np_2) \wedge ((v3_memstr_0 k1_scmpds_2 np_2) \wedge \\
& (v1_extpro_1 k1_scmpds_2 np_2))
\end{aligned} \tag{6}$$

Assume the following.

$$(\neg v2_struct_0 k1_scmpds_2) \wedge (v1_extpro_1 k1_scmpds_2 np_2) \tag{7}$$

Assume the following.

$$\forall X0. \forall X1. (l1_extpro_1 X1 X0) \Rightarrow ((l1_memstr_0 X1 X0) \wedge (l1_compos_1 X1)) \tag{8}$$

Assume the following.

$$(v1_extpro_1 k1_scmpds_2 np_2) \wedge (l1_extpro_1 k1_scmpds_2 np_2) \tag{9}$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \tag{10}$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow ((\neg v1_xboole_0 X0) \wedge ((v7_ordinal1 X0) \wedge (\neg v1_setfam_1 X0))) \tag{11}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmpds_2)) \wedge \\ & ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge \\ & (v1_partfun1 X0 (u1_struct_0 k1_scmpds_2)))))) \Rightarrow (\forall X1. \\ & ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 (u1_struct_0 k1_scmpds_2)) \wedge \\ & ((v1_funct_1 X1) \wedge ((v5_funct_1 X1 (k2_memstr_0 np_2 k1_scmpds_2)) \wedge \\ & (v1_partfun1 X1 (u1_struct_0 k1_scmpds_2)))))) \Rightarrow (\forall X2. \\ & ((v1_ami_2 X2) \wedge (m1_subset_1 X2 (u1_struct_0 k1_scmpds_2))) \Rightarrow \\ & (k1_funct_1 X0 X2 = k1_funct_1 X1 X2)) \Rightarrow (k8_memstr_0 np_2 k1_scmpds_2 \\ & X0 = k8_memstr_0 np_2 k1_scmpds_2 X1))) \end{aligned}$$