

t4_scmbstort
(TMGvpDqFdWd64EFcMcbN7uLyiPfdDoWCnt6f)

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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 $m1_scmf_sa_2 : \iota \Rightarrow o$ 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 $v1_ami_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_scmf_sa_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_scmf_sa_2 : \iota \Rightarrow \iota$ be given. Let $k1_scmf_sa_m : \iota \Rightarrow \iota$ 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 $k1_int_2 : \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_numbers : \iota$ be given. Let $k18_scmf_sa_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_scmf_sa_m : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume

the following.

$$\begin{aligned}
& \forall X0.(m1_scmfsa_2 X0) \Rightarrow (\forall X1.((v1_ami_2 X1) \wedge (m1_subset_1 \\
& \quad X1 (u1_struct_0 k1_scmfsa_2))) \Rightarrow (\forall X2.((v1_ami_2 X2) \wedge (\\
& \quad m1_subset_1 X2 (u1_struct_0 k1_scmfsa_2))) \Rightarrow (\forall X3.((v1_relat_1 \\
& \quad X3) \wedge ((v4_relat_1 X3 (u1_struct_0 k1_scmfsa_2)) \wedge ((v1_funct_1 \\
& \quad X3) \wedge ((v5_funct_1 X3 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge (v1_partfun1 \\
& \quad X3 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow ((k1_funct_1 (k2_extpro_1 \\
np_3 k1_scmfsa_2 (k14_scmfsa_2 X1 X2 X0) X3) (k4_struct_0 k1_scmfsa_2) = \\
& \quad k4_card_1 (k5_memstr_0 np_3 k1_scmfsa_2 X3)) \wedge ((\exists X4.(\\
& \quad m1_subset_1 X4 k5_numbers) \wedge ((X4 = k1_int_2 (k1_funct_1 X3 X2)) \wedge \\
& \quad (k1_funct_1 (k2_extpro_1 np_3 k1_scmfsa_2 (k14_scmfsa_2 X1 X2 \\
& \quad X0) X3) X1 = k7_partfun1 k4_numbers (k18_scmfsa_2 X3 X0) X4))) \wedge (\\
& \quad (\forall X4.((v1_ami_2 X4) \wedge (m1_subset_1 X4 (u1_struct_0 k1_scmfsa_2))) \Rightarrow \\
& \quad ((X4 \neq X1) \Rightarrow (k1_funct_1 (k2_extpro_1 np_3 k1_scmfsa_2 (k14_scmfsa_2 \\
& \quad X1 X2 X0) X3) X4 = k1_funct_1 X3 X4))) \wedge (\forall X4.(m1_scmfsa_2 X4) \Rightarrow \\
& \quad (r2_relset_1 k5_numbers k4_numbers (k18_scmfsa_2 (k2_extpro_1 \\
& \quad np_3 k1_scmfsa_2 (k14_scmfsa_2 X1 X2 X0) X3) X4) (k18_scmfsa_2 \\
& \quad X3 X4)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\
& ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\
& (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow ((\forall X1. \\
& ((v1_ami_2 X1) \wedge ((\neg v1_scmfsa_m X1) \wedge (m1_subset_1 X1 (u1_struct_0 \\
& k1_scmfsa_2)))) \Rightarrow (k1_funct_1 (k1_scmfsa_m X0) X1 = k1_funct_1 \\
& X0 X1)) \wedge (\forall X1.(m1_scmfsa_2 X1) \Rightarrow (k18_scmfsa_2 (k1_scmfsa_m \\
& X0) X1 = k18_scmfsa_2 X0 X1)))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\neg \\
(X0 \neq X1) \wedge (k4_scmfsa_2 X0 = k4_scmfsa_2 X1))) \tag{3}$$

Assume the following.

$$((v2_xreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\
((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
(m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\
X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \tag{5}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(k2_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (7)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0)\wedge((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2))\wedge \\ & ((v1_funct_1 X0)\wedge((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2))\wedge \\ & (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2))))))\Rightarrow((v1_relat_1 \\ & (k1_scmfsa_m X0))\wedge((v4_relat_1 (k1_scmfsa_m X0) (u1_struct_0 \\ & k1_scmfsa_2))\wedge((v1_funct_1 (k1_scmfsa_m X0))\wedge((v5_funct_1 \\ & (k1_scmfsa_m X0) (k2_memstr_0 np_3 k1_scmfsa_2))\wedge(v1_partfun1 \\ & (k1_scmfsa_m X0) (u1_struct_0 k1_scmfsa_2)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(v7_ordinal1 X1))\Rightarrow(v7_ordinal1 (k2_xcmplx_0 X0 X1)) \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow((v1_ami_2 (k4_scmfsa_2 (k2_nat_1 X0 np_1)))\wedge(\neg v1_scmfsa_m (k4_scmfsa_2 (k2_nat_1 X0 np_1)))) \quad (12)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow((v1_ami_2 (k4_scmfsa_2 X0))\wedge(m1_subset_1 (k4_scmfsa_2 X0) (u1_struct_0 k1_scmfsa_2))) \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\ & ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\ & (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow (\forall X1. \\ & (m1_scmfsa_2 X1) \Rightarrow (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow \\ & (\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow (\forall X4. \\ & ((v1_ami_2 X4) \wedge (m1_subset_1 X4 (u1_struct_0 k1_scmfsa_2)))) \Rightarrow \\ & ((X2 \neq k2_nat_1 X3 np_1) \Rightarrow (k1_funct_1 (k2_extpro_1 np_3 k1_scmfsa_2 \\ & (k14_scmfsa_2 (k4_scmfsa_2 X2) X4 X1) (k1_scmfsa_m X0)) (k4_scmfsa_2 \\ & (k2_nat_1 X3 np_1)) = k1_funct_1 X0 (k4_scmfsa_2 (k2_nat_1 X3 np_1))))))))) \end{aligned}$$