

t2_scmfsa6b
(TMbzipJLAgFyFvri2PGfvdo4ZgzbpzTCqYeJ)

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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 $k1_scmfsa_2 : \iota$ 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 $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_afinsq_1 : \iota \Rightarrow o$ be given. Let $v7_amistd_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_scmfsa_2 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $r1_extpro_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v5_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_ami_2 : \iota \Rightarrow o$ be given. Let $v4_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1_setfam_1 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge \\
& ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\
& (\forall X2. (v7_ordinal1 X2) \Rightarrow (\forall X3. ((v1_relat_1 X3) \wedge (\\
& (v4_relat_1 X3 (u1_struct_0 X1)) \wedge ((v1_funct_1 X3) \wedge (v5_funct_1 \\
& X3 (k2_memstr_0 X0 X1)))) \Rightarrow ((v5_memstr_0 X3 X0 X1 X2) \Leftrightarrow (r1_tarski \\
& (k7_memstr_0 X0 X1 X2) X3))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge(v1_funct_1 X1))\Rightarrow(r1_tarski X0 (k1_funct_4 X1 X0))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarski X0 X1)\wedge(r1_tarski X1 X2))\Rightarrow(r1_tarski X0 X2) \quad (3)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (4)$$

Assume the following.

$$((v2_xxreal_0 np_3)\wedge(m2_subset_1 np_3 k1_numbers k5_numbers))\wedge((m1_subset_1 np_3 k5_numbers)\wedge(m1_subset_1 np_3 k1_numbers)) \quad (5)$$

Assume the following.

$$\neg v1_xboole_0 np_3 \quad (6)$$

Assume the following.

$$((v2_xxreal_0 np_1)\wedge(m2_subset_1 np_1 k1_numbers k5_numbers))\wedge((m1_subset_1 np_1 k5_numbers)\wedge(m1_subset_1 np_1 k1_numbers)) \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_ami_2 X0)\wedge(m1_subset_1 X0 (u1_struct_0 k1_scmf_sa_2)))\wedge(v7_ordinal1 X1))\Rightarrow((v1_relat_1 (k16_funcop_1 X0 X1))\wedge((v4_relat_1 (k16_funcop_1 X0 X1) (u1_struct_0 k1_scmf_sa_2))\wedge((v1_funct_1 (k16_funcop_1 X0 X1))\wedge((v5_funct_1 (k16_funcop_1 X0 X1) (k2_memstr_0 np_3 k1_scmf_sa_2))\wedge(v4_memstr_0 (k16_funcop_1 X0 X1) np_3 k1_scmf_sa_2)))))) \quad (10)$$

Assume the following.

$$(v3_memstr_0 k1_scmf_sa_2 np_3)\wedge(v1_extpro_1 k1_scmf_sa_2 np_3) \quad (11)$$

Assume the following.

$$(\neg v2_struct_0 k1_scmf_sa_2)\wedge((v2_memstr_0 k1_scmf_sa_2 np_3)\wedge(v1_extpro_1 k1_scmf_sa_2 np_3)) \quad (12)$$

Assume the following.

$$(v1_extpro_1\ k1_scmf_sa_2\ np_3) \wedge (v3_extpro_1\ k1_scmf_sa_2\ np_3) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1\ (k16_funcop_1\ X0\ X1)) \wedge (v1_funct_1\ (k16_funcop_1\ X0\ X1)) \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. (l1_extpro_1\ X1\ X0) \Rightarrow ((l1_memstr_0\ X1\ X0) \wedge (l1_compos_1\ X1)) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_setfam_1\ X0) \wedge (((\neg v2_struct_0\ X1) \wedge ((v2_memstr_0\ X1\ X0) \wedge ((v3_memstr_0\ X1\ X0) \wedge (l1_memstr_0\ X1\ X0)))) \wedge (v7_ordinal1\ X2))) \Rightarrow ((v1_relat_1\ (k7_memstr_0\ X0\ X1\ X2)) \wedge \\ & ((v4_relat_1\ (k7_memstr_0\ X0\ X1\ X2)\ (u1_struct_0\ X1)) \wedge ((v1_funct_1\ (k7_memstr_0\ X0\ X1\ X2)) \wedge (v5_funct_1\ (k7_memstr_0\ X0\ X1\ X2)\ (k2_memstr_0\ X0\ X1)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0. \forall X1. (v1_funct_1\ (k7_funcop_1\ X0\ X1)) \wedge ((v1_funct_2\ (k7_funcop_1\ X0\ X1)\ X0\ (k1_tarski\ X1)) \wedge (m1_subset_1\ (k7_funcop_1\ X0\ X1)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ (k1_tarski\ X1)))))) \quad (17)$$

Assume the following.

$$\forall X0. (v7_ordinal1\ X0) \Rightarrow ((v1_ami_2\ (k4_scmf_sa_2\ X0)) \wedge (m1_subset_1\ (k4_scmf_sa_2\ X0)\ (u1_struct_0\ k1_scmf_sa_2))) \quad (18)$$

Assume the following.

$$(v1_extpro_1\ k1_scmf_sa_2\ np_3) \wedge (l1_extpro_1\ k1_scmf_sa_2\ np_3) \quad (19)$$

Assume the following.

$$\forall X0. \forall X1. k16_funcop_1\ X0\ X1 = k7_funcop_1\ (k1_tarski\ X0)\ X1 \quad (20)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_setfam_1\ X0) \Rightarrow (\forall X1. ((\neg v2_struct_0\ X1) \wedge ((v2_memstr_0\ X1\ X0) \wedge ((v3_memstr_0\ X1\ X0) \wedge (l1_memstr_0\ X1\ X0)))) \Rightarrow \\ & (\forall X2. ((v1_relat_1\ X2) \wedge ((v4_relat_1\ X2\ (u1_struct_0\ X1)) \wedge ((v1_funct_1\ X2) \wedge (v5_funct_1\ X2\ (k2_memstr_0\ X0\ X1)))))) \Rightarrow (k8_memstr_0\ X0\ X1\ X2 = k1_funct_4\ X2\ (k7_memstr_0\ X0\ X1\ k6_numbers))) \end{aligned} \quad (21)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge ((v3_extpro_1 X1 X0) \wedge \\
& (l1_extpro_1 X1 X0)))))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 \\
& X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 X1)) \wedge (v1_funct_1 \\
& X2)))) \Rightarrow ((v7_amistd_1 X2 X0 X1) \Leftrightarrow (\forall X3.((v1_relat_1 X3) \wedge \\
& ((v4_relat_1 X3 (u1_struct_0 X1)) \wedge ((v1_funct_1 X3) \wedge ((v5_funct_1 \\
& X3 (k2_memstr_0 X0 X1)) \wedge ((v1_partfun1 X3 (u1_struct_0 X1)) \wedge (v5_memstr_0 \\
& X3 X0 X1 k6_numbers)))))) \Rightarrow (\forall X4.((v1_relat_1 X4) \wedge ((v4_relat_1 \\
& X4 k5_numbers) \wedge ((v5_relat_1 X4 (u1_compos_1 X1)) \wedge ((v1_funct_1 \\
& X4) \wedge (v1_partfun1 X4 k5_numbers)))))) \Rightarrow ((r1_tarski X2 X4) \Rightarrow (r1_extpro_1 \\
& X0 X1 X4 X3))))))
\end{aligned} \tag{22}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \tag{23}$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0)) \Rightarrow ((\neg v1_xboole_0 X0) \wedge ((v7_ordinal1 X0) \wedge (\neg v1_setfam_1 X0))) \tag{24}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 (u1_struct_0 k1_scmfsa_2)) \wedge \\
& ((v1_funct_1 X0) \wedge ((v5_funct_1 X0 (k2_memstr_0 np_3 k1_scmfsa_2)) \wedge \\
& (v1_partfun1 X0 (u1_struct_0 k1_scmfsa_2)))))) \Rightarrow (\forall X1. \\
& ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v5_relat_1 X1 \\
& (u1_compos_1 k1_scmfsa_2)) \wedge ((\neg v1_xboole_0 X1) \wedge ((v1_funct_1 \\
& X1) \wedge ((v1_finset_1 X1) \wedge ((v1_afinsq_1 X1) \wedge (v7_amistd_1 X1 np_3 \\
& k1_scmfsa_2)))))) \Rightarrow ((r1_tarski (k8_memstr_0 np_3 k1_scmfsa_2 \\
& (k16_funcop_1 (k4_scmfsa_2 k6_numbers) np_1)) X0) \Rightarrow (\forall X2. \\
& ((v1_relat_1 X2) \wedge ((v4_relat_1 X2 k5_numbers) \wedge ((v5_relat_1 X2 \\
& (u1_compos_1 k1_scmfsa_2)) \wedge ((v1_funct_1 X2) \wedge (v1_partfun1 X2 \\
& k5_numbers)))))) \Rightarrow ((r1_tarski X1 X2) \Rightarrow (r1_extpro_1 np_3 k1_scmfsa_2 \\
& X2 X0))))))
\end{aligned}$$