

t73_memstr_0
(TMVAkvKG72gz9CwrUk1j8BEoyMT5coscDet)

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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 $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (k1_funct_4 X1 X0 = X1))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X0 \in k9_xtuple_0 X1) \Rightarrow (r1_tarski (k16_funcop_1 X0 (k1_funct_1 X1 X0)) X1)) \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\
& (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (u1_struct_0 X1)) \wedge \\
& ((v1_funct_1 X2) \wedge (v5_funct_1 X2 (k2_memstr_0 X0 X1)))))) \Rightarrow (\forall X3. \\
& (v7_ordinal1 X3) \Rightarrow (k5_memstr_0 X0 X1 (k9_memstr_0 X0 X1 X2 X3) = k2_nat_1 \\
& (k5_memstr_0 X0 X1 X2) X3)))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\
& (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (u1_struct_0 X1)) \wedge \\
& ((v1_funct_1 X2) \wedge (v5_funct_1 X2 (k2_memstr_0 X0 X1)))))) \Rightarrow (\forall X3. \\
& (v7_ordinal1 X3) \Rightarrow (\forall X4.(v7_ordinal1 X4) \Rightarrow (k1_funct_4 (\\
& k1_funct_4 X2 (k7_memstr_0 X0 X1 X3)) (k7_memstr_0 X0 X1 X4) = k1_funct_4 \\
& X2 (k7_memstr_0 X0 X1 X4))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (k7_nat_d \\
(k2_xcmplx_0 X0 X1) X1 = X0)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
(m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\
X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \tag{6}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers) \wedge (v7_ordinal1 \\
X1)) \Rightarrow (k2_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \tag{8}$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 (k16_funcop_1 X0 X1)) \wedge (v1_funct_1 \\
(k16_funcop_1 X0 X1)) \tag{10}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_setfam_1 X0)\wedge \\ & (((\neg v2_struct_0 X1)\wedge((v2_memstr_0 X1 X0)\wedge((v3_memstr_0 X1 X0)\wedge \\ & (l1_memstr_0 X1 X0))))\wedge((v1_relat_1 X2)\wedge((v4_relat_1 X2 (u1_struct_0 \\ & X1))\wedge((v1_funct_1 X2)\wedge(v5_funct_1 X2 (k2_memstr_0 X0 X1))))\wedge \\ & (v7_ordinal1 X3)))\Rightarrow((v1_relat_1 (k9_memstr_0 X0 X1 X2 X3)\wedge(\\ & (v4_relat_1 (k9_memstr_0 X0 X1 X2 X3) (u1_struct_0 X1))\wedge((v1_funct_1 \\ & (k9_memstr_0 X0 X1 X2 X3)\wedge(v5_funct_1 (k9_memstr_0 X0 X1 X2 X3) \\ & (k2_memstr_0 X0 X1)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(v7_ordinal1 X1))\Rightarrow(m1_subset_1 (k7_nat_d X0 X1) k5_numbers) \quad (12)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_setfam_1 X0)\wedge(((\neg v2_struct_0 \\ & X1)\wedge((v2_memstr_0 X1 X0)\wedge((v3_memstr_0 X1 X0)\wedge(l1_memstr_0 X1 \\ & X0))))\wedge((v1_relat_1 X2)\wedge((v4_relat_1 X2 (u1_struct_0 X1))\wedge(\\ & (v1_funct_1 X2)\wedge(v5_funct_1 X2 (k2_memstr_0 X0 X1))))))\Rightarrow(m2_subset_1 \\ & (k5_memstr_0 X0 X1 X2) k1_numbers k5_numbers) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.k16_funcop_1 X0 X1 = k7_funcop_1 (k1_tarski X0) X1 \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_setfam_1 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge \\ & ((v2_memstr_0 X1 X0)\wedge((v3_memstr_0 X1 X0)\wedge(l1_memstr_0 X1 X0))))\Rightarrow \\ & (\forall X2.((v1_relat_1 X2)\wedge((v4_relat_1 X2 (u1_struct_0 X1))\wedge \\ & ((v1_funct_1 X2)\wedge(v5_funct_1 X2 (k2_memstr_0 X0 X1))))))\Rightarrow(k5_memstr_0 \\ & X0 X1 X2 = k1_funct_1 X2 (k4_struct_0 X1))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_setfam_1 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge \\ & ((v2_memstr_0 X1 X0)\wedge((v3_memstr_0 X1 X0)\wedge(l1_memstr_0 X1 X0))))\Rightarrow \\ & (\forall X2.((v1_relat_1 X2)\wedge((v4_relat_1 X2 (u1_struct_0 X1))\wedge \\ & ((v1_funct_1 X2)\wedge(v5_funct_1 X2 (k2_memstr_0 X0 X1))))))\Rightarrow(\forall X3. \\ & (v7_ordinal1 X3)\Rightarrow(k10_memstr_0 X0 X1 X2 X3 = k1_funct_4 X2 (k7_memstr_0 \\ & X0 X1 (k7_nat_d (k5_memstr_0 X0 X1 X2) X3)))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\
& (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (u1_struct_0 X1)) \wedge \\
& ((v1_funct_1 X2) \wedge (v5_funct_1 X2 (k2_memstr_0 X0 X1)))))) \Rightarrow (\forall X3. \\
& (v7_ordinal1 X3) \Rightarrow (k9_memstr_0 X0 X1 X2 X3 = k1_funct_4 X2 (k7_memstr_0 \\
& X0 X1 (k2_nat_1 (k5_memstr_0 X0 X1 X2) X3))))))
\end{aligned} \tag{18}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\
& (\forall X2.(v7_ordinal1 X2) \Rightarrow (k7_memstr_0 X0 X1 X2 = k16_funcop_1 \\
& (k4_struct_0 X1) X2)))
\end{aligned} \tag{19}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \tag{20}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \tag{21}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\
& (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (u1_struct_0 X1)) \wedge \\
& ((v1_funct_1 X2) \wedge (v5_funct_1 X2 (k2_memstr_0 X0 X1)))))) \Rightarrow (\forall X3. \\
& (v7_ordinal1 X3) \Rightarrow ((k4_struct_0 X1 \in k9_xtuple_0 X2) \Rightarrow (k10_memstr_0 \\
& X0 X1 (k9_memstr_0 X0 X1 X2 X3) X3 = X2))))))
\end{aligned}$$