

t58_memstr_0

(TMN288FyG288z9aoJUiRMFNRZHXS9MBNt4y)

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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 $k9_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1_setfam_1 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge \\
 & ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\
 & (\forall X2. ((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (u1_struct_0 X1)) \wedge \\
 & ((v1_funct_1 X2) \wedge (v5_funct_1 X2 (k2_memstr_0 X0 X1)))))) \Rightarrow (\forall X3. \\
 & (v7_ordinal1 X3) \Rightarrow (k5_memstr_0 X0 X1 (k1_funct_4 X2 (k7_memstr_0 \\
 & X0 X1 X3)) = X3))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 \\
 & X2)) \Rightarrow (\forall X3. k1_funct_4 (k1_funct_4 X2 (k16_funcop_1 X3 X0)) \\
 & (k16_funcop_1 X3 X1) = k1_funct_4 X2 (k16_funcop_1 X3 X1))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\
 & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
 \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.k7_funcop_1 X0 X1 = k2_funcop_1 X0 X1 \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(k2_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge(v1_funct_1 X1)))\wedge((v1_relat_1 X2)\wedge((v4_relat_1 X2 X0)\wedge(v1_funct_1 X2))))\Rightarrow((v1_relat_1 (k1_funct_4 X1 X2))\wedge((v4_relat_1 (k1_funct_4 X1 X2) X0)\wedge(v1_funct_1 (k1_funct_4 X1 X2)))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k2_zfmisc_1 X0 X1) \quad (8)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(v7_ordinal1 X1))\Rightarrow(v7_ordinal1 (k2_xcmplx_0 X0 X1)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 (k2_funcop_1 X0 X1))\wedge(v1_funct_1 (k2_funcop_1 X0 X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1_relat_1 X0)\wedge(v1_funct_1 X0))\wedge(((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v5_funct_1 X1 X0)))\wedge((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v5_funct_1 X2 X0))))\Rightarrow(((v1_relat_1 (k1_funct_4 X1 X2))\wedge((v1_funct_1 (k1_funct_4 X1 X2))\wedge(v5_funct_1 (k1_funct_4 X1 X2) X0)))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_setfam_1 X0)\wedge(((\neg v2_struct_0 X1)\wedge((v2_memstr_0 X1 X0)\wedge((v3_memstr_0 X1 X0)\wedge(l1_memstr_0 X1 X0))))\wedge(v7_ordinal1 X2))\Rightarrow((v1_relat_1 (k7_memstr_0 X0 X1 X2))\wedge((v4_relat_1 (k7_memstr_0 X0 X1 X2) (u1_struct_0 X1))\wedge((v1_funct_1 (k7_memstr_0 X0 X1 X2))\wedge(v5_funct_1 (k7_memstr_0 X0 X1 X2) (k2_memstr_0 X0 X1)))))) \quad (13)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_setfam_1 \ X0) \wedge (((\neg v2_struct_0 \\ & X1) \wedge ((v2_memstr_0 \ X1 \ X0) \wedge ((v3_memstr_0 \ X1 \ X0) \wedge (l1_memstr_0 \ X1 \\ & X0)))) \wedge ((v1_relat_1 \ X2) \wedge ((v4_relat_1 \ X2 \ (u1_struct_0 \ X1)) \wedge \\ & (v1_funct_1 \ X2) \wedge (v5_funct_1 \ X2 \ (k2_memstr_0 \ X0 \ X1)))))) \Rightarrow (m2_subset_1 \\ & (k5_memstr_0 \ X0 \ X1 \ X2) \ k1_numbers \ k5_numbers) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_setfam_1 \ X0) \wedge (l1_memstr_0 \ X1 \ X0)) \Rightarrow \\ & ((v1_relat_1 \ (k2_memstr_0 \ X0 \ X1)) \wedge ((v4_relat_1 \ (k2_memstr_0 \\ & X0 \ X1) \ (u1_struct_0 \ X1)) \wedge ((v1_funct_1 \ (k2_memstr_0 \ X0 \ X1)) \wedge (v1_partfun1 \\ & (k2_memstr_0 \ X0 \ X1) \ (u1_struct_0 \ X1)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1 \ X0) \wedge (v1_funct_1 \ X0)) \wedge ((\\ & v1_relat_1 \ X1) \wedge (v1_funct_1 \ X1))) \Rightarrow ((v1_relat_1 \ (k1_funct_4 \ X0 \\ & X1)) \wedge (v1_funct_1 \ (k1_funct_4 \ X0 \ X1))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0. \forall X1. k16_funcop_1 \ X0 \ X1 = k7_funcop_1 \ (k1_tarski \ X0) \ X1 \quad (18)$$

Assume the following.

$$\forall X0. \forall X1. k2_funcop_1 \ X0 \ X1 = k2_zfmisc_1 \ X0 \ (k1_tarski \ X1) \quad (19)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_setfam_1 \ X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 \ X1) \wedge \\ & ((v2_memstr_0 \ X1 \ X0) \wedge ((v3_memstr_0 \ X1 \ X0) \wedge (l1_memstr_0 \ X1 \ X0)))) \Rightarrow \\ & (\forall X2. ((v1_relat_1 \ X2) \wedge ((v4_relat_1 \ X2 \ (u1_struct_0 \ X1)) \wedge \\ & ((v1_funct_1 \ X2) \wedge (v5_funct_1 \ X2 \ (k2_memstr_0 \ X0 \ X1)))))) \Rightarrow (\forall X3. \\ & (v7_ordinal1 \ X3) \Rightarrow (k9_memstr_0 \ X0 \ X1 \ X2 \ X3 = k1_funct_4 \ X2 \ (k7_memstr_0 \\ & X0 \ X1 \ (k2_nat_1 \ (k5_memstr_0 \ X0 \ X1 \ X2) \ X3)))))) \end{aligned} \quad (20)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_setfam_1 \ X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 \ X1) \wedge \\ & ((v2_memstr_0 \ X1 \ X0) \wedge ((v3_memstr_0 \ X1 \ X0) \wedge (l1_memstr_0 \ X1 \ X0)))) \Rightarrow \\ & (\forall X2. (v7_ordinal1 \ X2) \Rightarrow (k7_memstr_0 \ X0 \ X1 \ X2 = k16_funcop_1 \\ & (k4_struct_0 \ X1) \ X2))) \end{aligned} \quad (21)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (22)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\ & (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (u1_struct_0 X1)) \wedge \\ & ((v1_funct_1 X2) \wedge (v5_funct_1 X2 (k2_memstr_0 X0 X1)))))) \Rightarrow (\forall X3. \\ & (v7_ordinal1 X3) \Rightarrow (\forall X4.(v7_ordinal1 X4) \Rightarrow (k9_memstr_0 \\ X0 X1 (k1_funct_4 X2 (k7_memstr_0 X0 X1 X3)) X4 = k1_funct_4 X2 (k7_memstr_0 \\ X0 X1 (k2_xcmplx_0 X3 X4)))))) \end{aligned}$$