

t79_memstr_0

(TMJprgyXjRSe5EtFwAW9mUBX27ucm1hXRSW)

October 27, 2020

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 $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k6_memstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ 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 $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k8_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ & v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2.k5_relat_1 (k1_funct_4 \\ & X0 X1) X2 = k1_funct_4 (k5_relat_1 X0 X2) (k5_relat_1 X1 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\ & (\forall X2.(v7_ordinal1 X2) \Rightarrow (k6_memstr_0 X0 X1 (k7_memstr_0 \\ & X0 X1 X2) = k1_xboole_0))) \end{aligned} \quad (2)$$

Assume the following.

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

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.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge(v1_funct_1 X0))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_xboole_0 X1))))\Rightarrow(k1_funct_4 X0 X1 = X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow((v1_relat_1 (k5_relat_1 X0 X1))\wedge(v1_funct_1 (k5_relat_1 X0 X1))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge(v1_funct_1 X1)))\wedge((v1_relat_1 X2)\wedge((v4_relat_1 X2 X0)\wedge(v1_funct_1 X2))))\Rightarrow((v1_relat_1 (k1_funct_4 X1 X2))\wedge((v4_relat_1 (k1_funct_4 X1 X2) X0)\wedge(v1_funct_1 (k1_funct_4 X1 X2)))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k2_zfmisc_1 X0 X1) \quad (9)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (10)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (11)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1_relat_1 X0)\wedge(v1_funct_1 X0))\wedge(((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v5_funct_1 X1 X0)))\wedge((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v5_funct_1 X2 X0))))))\Rightarrow((v1_relat_1 (k1_funct_4 X1 X2))\wedge((v1_funct_1 (k1_funct_4 X1 X2))\wedge(v5_funct_1 (k1_funct_4 X1 X2) X0))) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_setfam_1 X0)\wedge(((\neg v2_struct_0 \\ & X1)\wedge((v2_memstr_0 X1 X0)\wedge((v3_memstr_0 X1 X0)\wedge(l1_memstr_0 X1 \\ & X0))))\wedge(v7_ordinal1 X2)))\Rightarrow((v1_relat_1 (k7_memstr_0 X0 X1 X2))\wedge \\ & ((v4_relat_1 (k7_memstr_0 X0 X1 X2) (u1_struct_0 X1))\wedge((v1_funct_1 \\ & (k7_memstr_0 X0 X1 X2))\wedge(v5_funct_1 (k7_memstr_0 X0 X1 X2) (k2_memstr_0 \\ & X0 X1)))))) \end{aligned} \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X0)\Rightarrow(v1_relat_1 (k5_relat_1 X0 X1)) \tag{15}$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \tag{16}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_setfam_1 X0)\wedge(l1_memstr_0 X1 X0))\Rightarrow \\ & ((v1_relat_1 (k2_memstr_0 X0 X1))\wedge((v4_relat_1 (k2_memstr_0 \\ & X0 X1) (u1_struct_0 X1))\wedge((v1_funct_1 (k2_memstr_0 X0 X1))\wedge(v1_partfun1 \\ & (k2_memstr_0 X0 X1) (u1_struct_0 X1)))))) \end{aligned} \tag{17}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v1_relat_1 X0)\wedge(v1_funct_1 X0))\wedge((\\ & v1_relat_1 X1)\wedge(v1_funct_1 X1)))\Rightarrow((v1_relat_1 (k1_funct_4 X0 \\ & X1))\wedge(v1_funct_1 (k1_funct_4 X0 X1))) \end{aligned} \tag{18}$$

Assume the following.

$$\forall X0.\forall X1.k16_funcop_1 X0 X1 = k7_funcop_1 (k1_tarski X0) X1 \tag{19}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_setfam_1 X0)\Rightarrow(\forall X1.(l1_memstr_0 X1 X0)\Rightarrow \\ & (\forall X2.((v1_relat_1 X2)\wedge((v4_relat_1 X2 (u1_struct_0 X1))\wedge \\ & ((v1_funct_1 X2)\wedge(v5_funct_1 X2 (k2_memstr_0 X0 X1))))))\Rightarrow(k6_memstr_0 \\ & X0 X1 X2 = k5_relat_1 X2 (k8_struct_0 X1))) \end{aligned} \tag{20}$$

Assume the following.

$$\forall X0.\forall X1.k2_funcop_1 X0 X1 = k2_zfmisc_1 X0 (k1_tarski X1) \tag{21}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\ & (\forall X2.(v7_ordinal1 X2) \Rightarrow (k7_memstr_0 X0 X1 X2 = k16_funcop_1 \\ & (k4_struct_0 X1) X2))) \end{aligned} \quad (22)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (23)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v1_relat_1 X0) \quad (24)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v1_funct_1 X0) \quad (25)$$

Assume the following.

$$\forall X0.(v6_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v7_ordinal1 X1)) \quad (26)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge (l1_memstr_0 X1 X0)))) \Rightarrow \\ & (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 X2 (u1_struct_0 X1)) \wedge \\ & ((v1_funct_1 X2) \wedge ((v5_funct_1 X2 (k2_memstr_0 X0 X1)) \wedge (v1_partfun1 \\ & X2 (u1_struct_0 X1)))))) \Rightarrow (\forall X3.(m2_subset_1 X3 k1_numbers \\ & k5_numbers) \Rightarrow (k6_memstr_0 X0 X1 X2 = k6_memstr_0 X0 X1 (k1_funct_4 \\ & X2 (k7_memstr_0 X0 X1 X3)))))) \end{aligned}$$