

t61_matrix_4
(TMVtbPQ37jsSPVLFNckxpcPqFfig4EsancX)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_fvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $k4_fvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k13_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_finsop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow (m2_finseq_2 X1 X0 (k4_finseq_2 (k3_finseq_1 X1) X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge (l2_algstr_0 X1)))))) \Rightarrow (\forall X2. (m2_finseq_2 X2 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 X1))) \Rightarrow (\forall X3. (m2_finseq_2 X3 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 X1))) \Rightarrow (k4_rlvect_1 X1 (k4_fvsum_1 X0 X1 X2 X3) = k3_rlvect_1 X1 (k4_rlvect_1 X1 X2) (k4_rlvect_1 X1 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X0 k5_numbers)\wedge(((\neg v2_struct_0 X1)\wedge(l2_algstr_0 X1))\wedge((m1_subset_1 X2 (k4_finseq_2 X0 (u1_struct_0 X1)))\wedge(m1_subset_1 X3 (k4_finseq_2 X0 (u1_struct_0 X1))))))\Rightarrow(k4_fvsu1 X0 X1 X2 X3 = k3_fvsu1 X1 X2 X3) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v2_rlvect_1 X0)\wedge(l1_algstr_0 X0))\wedge((m1_subset_1 X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(k3_rlvect_1 X0 X1 X2 = k1_algstr_0 X0 X1 X2) \quad (8)$$

Assume the following.

$$\forall X0.k3_finseq_2 X0 = k13_finseq_1 X0 \quad (9)$$

Assume the following.

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

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \quad (11)$$

Assume the following.

$$\forall X0.(l1_algstr_0 X0)\Rightarrow((v1_funct_1 (u1_algstr_0 X0))\wedge((v1_funct_2 (u1_algstr_0 X0) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0))\wedge(m1_subset_1 (u1_algstr_0 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0)))))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (14)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0)\Rightarrow((l2_algstr_0 X0)\wedge(l5_algstr_0 X0)) \quad (15)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0)\Rightarrow(l1_struct_0 X0) \quad (16)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0)\Rightarrow((l2_struct_0 X0)\wedge(l1_algstr_0 X0)) \quad (17)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.(v7_ordinal1 X0)\Rightarrow(m1_finseq_2 (k4_finseq_2 X0 X1) X1) \quad (19)$$

Assume the following.

$$\forall X0.m1_finseq_2 (k3_finseq_2 X0) X0 \quad (20)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow(m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_finseq_1 X1 X0)\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 (k2_zfmisc_1 X0 X0) X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0))))))\Rightarrow(m1_subset_1 (k1_finsop_1 X0 X1 X2) X0) \quad (22)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))))) \Rightarrow \\ (\forall X1.(m2_finseq_1 X1 (u1_struct_0 X0)) \Rightarrow (k4_rlvect_1 X0 \\ X1 = k1_finsop_1 (u1_struct_0 X0) X1 (u1_algstr_0 X0))) \end{aligned} \quad (23)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.k4_finseq_2 X0 X1 = ReplSep \\ (toset (\lambda X2 : \iota.m2_finseq_2 X2 X1 (k3_finseq_2 X1))) (\lambda X2 : \\ \iota.k3_finseq_1 X2 = X0) (\lambda X2 : \iota.X2))) \end{aligned} \quad (24)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Leftrightarrow (\forall X1.\neg X1 \in X0) \quad (25)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \Rightarrow ((m1_subset_1 X1 X0) \Leftrightarrow \\ (X1 \in X0))) \wedge ((v1_xboole_0 X0) \Rightarrow ((m1_subset_1 X1 X0) \Leftrightarrow (v1_xboole_0 \\ X1))) \end{aligned} \quad (26)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k13_finseq_1 X0) \Leftrightarrow (\forall X2.(X2 \in \\ X1) \Leftrightarrow (m2_finseq_1 X2 X0)) \quad (27)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (28)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ X0)) \Rightarrow (v1_xboole_0 X1)) \quad (29)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge \\ (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\ X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ (m2_finseq_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m2_finseq_1 X2 \\ (u1_struct_0 X0)) \Rightarrow ((k3_finseq_1 X1 = k3_finseq_1 X2) \Rightarrow (k4_rlvect_1 \\ X0 (k3_fvsum_1 X0 X1 X2) = k1_algstr_0 X0 (k4_rlvect_1 X0 X1) (k4_rlvect_1 \\ X0 X2)))))) \end{aligned}$$