

t23_matrix14 (TMYPgYQKQY- BGxDtLQKubkvLgAdwFLgBku1p)

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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 $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix14 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_finseq_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l3_struct_0 : \iota \Rightarrow o$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\ (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow \\ (k3_finseq_1 (k1_finseq_7 X0 X1 X3 X2) = k3_finseq_1 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((v7_ordinal1 \\ X1) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k5_finseq_2 X0 X1 X2 = k2_finseq_2 X1 \\ X2) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (k3_finseq_1 X0 = k1_card_1 X0) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(v7_ordinal1\ X0)\Rightarrow((v1_relat_1\ (k2_finseq_2\ X0\ X1))\wedge((v1_funct_1\ (k2_finseq_2\ X0\ X1))\wedge((v3_card_1\ (k2_finseq_2\ X0\ X1)\ X0)\wedge(v1_finseq_1\ (k2_finseq_2\ X0\ X1)))))) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0)\wedge(l1_struct_0\ X0))\Rightarrow(\neg v1_xboole_0\ (u1_struct_0\ X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2\ X1\ X0)\Rightarrow(\forall X2.(m2_finseq_2\ X2\ X0\ X1)\Rightarrow(m2_finseq_1\ X2\ X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l6_algstr_0\ X0)\Rightarrow((l2_algstr_0\ X0)\wedge(l5_algstr_0\ X0)) \quad (7)$$

Assume the following.

$$\forall X0.(l5_algstr_0\ X0)\Rightarrow((l4_algstr_0\ X0)\wedge(l4_struct_0\ X0)) \quad (8)$$

Assume the following.

$$\forall X0.(l4_struct_0\ X0)\Rightarrow((l2_struct_0\ X0)\wedge(l3_struct_0\ X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l3_struct_0\ X0)\Rightarrow(l1_struct_0\ X0) \quad (10)$$

Assume the following.

$$\forall X0.(l3_struct_0\ X0)\Rightarrow(m1_subset_1\ (k5_struct_0\ X0)\ (u1_struct_0\ X0)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0\ X0)\wedge((v7_ordinal1\ X1)\wedge(m1_subset_1\ X2\ X0)))\Rightarrow(m2_finseq_2\ (k5_finseq_2\ X0\ X1\ X2)\ X0\ (k4_finseq_2\ X1\ X0)) \quad (12)$$

Assume the following.

$$\forall X0.(l2_struct_0\ X0)\Rightarrow(m1_subset_1\ (k4_struct_0\ X0)\ (u1_struct_0\ X0)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(v7_ordinal1\ X0)\Rightarrow(m1_finseq_2\ (k4_finseq_2\ X0\ X1)\ X1) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(v7_ordinal1\ X0)\Rightarrow((v1_relat_1\ (k2_finseq_2\ X0\ X1))\wedge((v1_funct_1\ (k2_finseq_2\ X0\ X1))\wedge(v1_finseq_1\ (k2_finseq_2\ X0\ X1)))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(v3_card_1\ X1\ X0)\Leftrightarrow(k1_card_1\ X1 = X0) \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge((\neg v6_struct_0\ X0)\wedge((v13_algstr_0\ X0)\wedge((v33_algstr_0\ X0)\wedge((v2_rlvect_1\ X0)\wedge((v3_rlvect_1\ X0)\wedge \\ ((v4_rlvect_1\ X0)\wedge((v3_group_1\ X0)\wedge((v5_group_1\ X0)\wedge((v4_vectsp_1\ X0)\wedge((v5_vectsp_1\ X0)\wedge(l6_algstr_0\ X0))))))))))\Rightarrow(\forall X1. \\ (v7_ordinal1\ X1)\Rightarrow(\forall X2.(v7_ordinal1\ X2)\Rightarrow(k3_matrix14\ X0\ X1\ X2 = k1_finseq_7\ (u1_struct_0\ X0)\ (k5_finseq_2\ (u1_struct_0\ X0)\ X1\ (k4_struct_0\ X0))\ X2\ (k5_struct_0\ X0)))) \quad (17) \end{aligned}$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0)\wedge((\neg v6_struct_0\ X0)\wedge((v13_algstr_0\ X0)\wedge((v33_algstr_0\ X0)\wedge((v2_rlvect_1\ X0)\wedge((v3_rlvect_1\ X0)\wedge \\ ((v4_rlvect_1\ X0)\wedge((v3_group_1\ X0)\wedge((v5_group_1\ X0)\wedge((v4_vectsp_1\ X0)\wedge((v5_vectsp_1\ X0)\wedge(l6_algstr_0\ X0))))))))))\Rightarrow(\forall X1. \\ (v7_ordinal1\ X1)\Rightarrow(\forall X2.(v7_ordinal1\ X2)\Rightarrow(k3_finseq_1\ (k3_matrix14\ X0\ X1\ X2) = X1))) \end{aligned}$$