

t7_matrixr2

(TMP97QpV7BFdawXnVK7su6rDibGF8Bh2z87)

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Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k3_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k8_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ 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 $k2_vectsp_1 : \iota$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_vectsp_1 : \iota \Rightarrow o$ be given. Let $v6_vectsp_1 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrixr1 : \iota \Rightarrow \iota$ be given. Let $k2_matrixr1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\forall X2. \\
 & ((v1_matrix_1\ X2) \wedge (m2_finseq_1\ X2\ (k3_finseq_2\ k1_numbers))) \Rightarrow \\
 & (((k3_finseq_1\ X2 = X0) \wedge (k1_matrix_1\ X2 = X1)) \Rightarrow ((r1_xxreal_0\ X0 \\
 & k6_numbers) \vee ((k3_matrixr1\ X2\ (k8_matrixr1\ X0\ X1) = X2) \wedge (k3_matrixr1 \\
 & (k8_matrixr1\ X0\ X1)\ X2 = X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge \\ & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\ & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ & ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\ & X0)))) \Rightarrow (k3_matrix_3 X0 X1 (k2_matrix_3 X0 X1) = k1_matrix_3 X0 (\\ & k3_finseq_1 X1) (k1_matrix_1 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & (\neg v6_struct_0 k2_vectsp_1) \wedge ((v13_algstr_0 k2_vectsp_1) \wedge ((\\ & v33_algstr_0 k2_vectsp_1) \wedge ((v36_algstr_0 k2_vectsp_1) \wedge ((v2_rlvect_1 \\ & k2_vectsp_1) \wedge ((v3_rlvect_1 k2_vectsp_1) \wedge ((v4_rlvect_1 k2_vectsp_1) \wedge \\ & ((v3_group_1 k2_vectsp_1) \wedge ((v5_group_1 k2_vectsp_1) \wedge ((v3_vectsp_1 \\ & k2_vectsp_1) \wedge ((v5_vectsp_1 k2_vectsp_1) \wedge (v6_vectsp_1 k2_vectsp_1)))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$(v36_algstr_0 k2_vectsp_1) \wedge (v4_vectsp_1 k2_vectsp_1) \quad (7)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (8)$$

Assume the following.

$$\forall X0. (v1_finset_1 X0) \Rightarrow ((v1_finset_1 (k1_card_1 X0)) \wedge (v1_card_1 (k1_card_1 X0))) \quad (9)$$

Assume the following.

$$(\neg v2_struct_0 k2_vectsp_1) \wedge (v36_algstr_0 k2_vectsp_1) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge (\\ & (v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ & X0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (12)$$

Assume the following.

$$(v36_algstr_0 k2_vectsp_1)\wedge(l6_algstr_0 k2_vectsp_1) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_matrix_1 X0)\wedge(m1_finseq_1 X0 (k3_finseq_2 k1_numbers)))\Rightarrow \\ ((v1_matrix_1 (k1_matrixr1 X0))\wedge(m2_finseq_1 (k1_matrixr1 X0) \\ (k3_finseq_2 (u1_struct_0 k2_vectsp_1)))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v1_finseq_1 \\ X0)\wedge(v1_matrix_1 X0))))\Rightarrow(m1_subset_1 (k1_matrix_1 X0) k5_numbers) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(v7_ordinal1 X1)\Rightarrow(k8_matrixr1 \\ X0 X1 = k2_matrixr1 (k1_matrix_3 k2_vectsp_1 X0 X1))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_matrix_1 X0)\wedge(m2_finseq_1 X0 (k3_finseq_2 k1_numbers)))\Rightarrow \\ (\forall X1.((v1_matrix_1 X1)\wedge(m2_finseq_1 X1 (k3_finseq_2 k1_numbers)))\Rightarrow \\ (k5_matrixr1 X0 X1 = k2_matrixr1 (k1_matrix_4 k2_vectsp_1 (k1_matrixr1 \\ X0) (k1_matrixr1 X1)))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_matrix_1 X0)\wedge(m2_finseq_1 X0 (k3_finseq_2 k1_numbers)))\Rightarrow \\ (k1_matrixr1 X0 = X0) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 X0)\wedge((v13_algstr_0 \\ X0)\wedge((v33_algstr_0 X0)\wedge((v3_group_1 X0)\wedge((v5_group_1 X0)\wedge \\ (v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v4_vectsp_1 \\ X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 X0))))))))))\Rightarrow(\forall X1. \\ ((v1_matrix_1 X1)\wedge(m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\ X0))))\Rightarrow(\forall X2.((v1_matrix_1 X2)\wedge(m2_finseq_1 X2 (k3_finseq_2 \\ (u1_struct_0 X0))))\Rightarrow(k1_matrix_4 X0 X1 X2 = k3_matrix_3 X0 X1 (k2_matrix_3 \\ X0 X2)))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0) \wedge (v1_finset1 X0)) \Rightarrow (v7_ordinal1 X0) \quad (20)$$

Assume the following.

$$\forall X0.((v1_relat1 X0) \wedge ((v1_funct1 X0) \wedge (v1_finseq1 X0))) \Rightarrow ((v1_relat1 X0) \wedge ((v1_funct1 X0) \wedge (v1_finset1 X0))) \quad (21)$$

Assume the following.

$$\forall X0.(v1_card1 X0) \Rightarrow (v3_ordinal1 X0) \quad (22)$$

Assume the following.

$$\forall X0.(v6_membered X0) \Rightarrow (\forall X1.(m1_subset1 X1 X0) \Rightarrow (v7_ordinal1 X1)) \quad (23)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_matrix1 X0) \wedge (m2_finseq1 X0 (k3_finseq2 k1_numbers))) \Rightarrow \\ & (\forall X1.((v1_matrix1 X1) \wedge (m2_finseq1 X1 (k3_finseq2 k1_numbers))) \Rightarrow \\ & (((k3_finseq1 X0 = k3_finseq1 X1) \wedge (k1_matrix1 X0 = k1_matrix1 \\ & X1)) \Rightarrow ((r1_xxreal0 (k3_finseq1 X0) k6_numbers) \vee (k3_matrixr1 \\ & X0 (k5_matrixr1 X1 X1) = X0)))) \end{aligned}$$