

t6_matrixr2

(TMQ7u7RjQQ9Tu7hRDBHCiLhK6JHevV4KR8j)

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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 $k5_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $k2_vectsp_1 : \iota$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ 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 $v3_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $v6_vectsp_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrixr1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrixr1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\
 & ((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 k1_numbers)))) \Rightarrow \\
 & (\forall X3.((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 k1_numbers)))) \Rightarrow \\
 & (((k3_finseq_1 X2 = k3_finseq_1 X3) \wedge ((k1_matrix_1 X2 = k1_matrix_1 \\
 & X3) \wedge (k4_tarski X0 X1 \in k2_matrix_1 X2))) \Rightarrow (k3_matrix_1 k1_numbers \\
 & (k5_matrixr1 X2 X3) X0 X1 = k9_real_1 (k3_matrix_1 k1_numbers X2 \\
 & X0 X1) (k3_matrix_1 k1_numbers X3 X0 X1))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{2}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{3}$$

Assume the following.

$$\begin{aligned}
& (\neg v6_struct_0 \ k2_vectsp_1) \wedge ((v13_algstr_0 \ k2_vectsp_1) \wedge ((\\
& v33_algstr_0 \ k2_vectsp_1) \wedge ((v36_algstr_0 \ k2_vectsp_1) \wedge ((v2_rlvect_1 \\
& k2_vectsp_1) \wedge ((v3_rlvect_1 \ k2_vectsp_1) \wedge ((v4_rlvect_1 \ k2_vectsp_1) \wedge \\
& ((v3_group_1 \ k2_vectsp_1) \wedge ((v5_group_1 \ k2_vectsp_1) \wedge ((v3_vectsp_1 \\
& k2_vectsp_1) \wedge ((v5_vectsp_1 \ k2_vectsp_1) \wedge (v6_vectsp_1 \ k2_vectsp_1))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$(v36_algstr_0 \ k2_vectsp_1) \wedge (v4_vectsp_1 \ k2_vectsp_1) \tag{5}$$

Assume the following.

$$v6_membered \ k4_ordinal1 \tag{6}$$

Assume the following.

$$(\neg v2_struct_0 \ k2_vectsp_1) \wedge (v36_algstr_0 \ k2_vectsp_1) \tag{7}$$

Assume the following.

$$(v36_algstr_0 \ k2_vectsp_1) \wedge (l6_algstr_0 \ k2_vectsp_1) \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 \ X0) \wedge ((\neg v6_struct_0 \ X0) \wedge \\
& ((v13_algstr_0 \ X0) \wedge ((v33_algstr_0 \ X0) \wedge ((v3_group_1 \ X0) \wedge ((v5_group_1 \\
& X0) \wedge ((v2_rlvect_1 \ X0) \wedge ((v3_rlvect_1 \ X0) \wedge ((v4_rlvect_1 \ X0) \wedge \\
& ((v4_vectsp_1 \ X0) \wedge ((v5_vectsp_1 \ X0) \wedge (l6_algstr_0 \ X0)))))))))) \wedge \\
& ((v1_matrix_1 \ X1) \wedge (m1_finseq_1 \ X1 \ (k3_finseq_2 \ (u1_struct_0 \\
& X0)))) \Rightarrow ((v1_matrix_1 \ (k2_matrix_3 \ X0 \ X1)) \wedge (m2_finseq_1 \ (k2_matrix_3 \\
& X0 \ X1) \ (k3_finseq_2 \ (u1_struct_0 \ X0))))
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((v1_matrix_1 \ X0) \wedge (m1_finseq_1 \ X0 \ (k3_finseq_2 \ k1_numbers))) \Rightarrow \\
& ((v1_matrix_1 \ (k1_matrixr1 \ X0)) \wedge (m2_finseq_1 \ (k1_matrixr1 \ X0) \\
& (k3_finseq_2 \ (u1_struct_0 \ k2_vectsp_1))))
\end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 \ X0) \wedge ((\neg v6_struct_0 \\
& X0) \wedge ((v13_algstr_0 \ X0) \wedge ((v33_algstr_0 \ X0) \wedge ((v3_group_1 \ X0) \wedge \\
& ((v5_group_1 \ X0) \wedge ((v2_rlvect_1 \ X0) \wedge ((v3_rlvect_1 \ X0) \wedge ((v4_rlvect_1 \\
& X0) \wedge ((v4_vectsp_1 \ X0) \wedge ((v5_vectsp_1 \ X0) \wedge (l6_algstr_0 \ X0)))))))))) \wedge \\
& (((v1_matrix_1 \ X1) \wedge (m1_finseq_1 \ X1 \ (k3_finseq_2 \ (u1_struct_0 \\
& X0)))) \wedge ((v1_matrix_1 \ X2) \wedge (m1_finseq_1 \ X2 \ (k3_finseq_2 \ (u1_struct_0 \\
& X0)))))) \Rightarrow ((v1_matrix_1 \ (k1_matrix_4 \ X0 \ X1 \ X2)) \wedge (m2_finseq_1 \\
& (k1_matrix_4 \ X0 \ X1 \ X2) \ (k3_finseq_2 \ (u1_struct_0 \ X0))))
\end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & (\forall X1.((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & (k5_matrixr1 X0 X1 = k2_matrixr1 (k1_matrix_4 k2_vectsp_1 (k1_matrixr1 \\ & X0) (k1_matrixr1 X1)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\ & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\ & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ & ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\ & X0)))) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\ & (u1_struct_0 X0)))) \Rightarrow (\forall X3.((v1_matrix_1 X3) \wedge (m2_finseq_1 \\ & X3 (k3_finseq_2 (u1_struct_0 X0)))) \Rightarrow ((X3 = k3_matrix_3 X0 X1 X2) \Leftrightarrow \\ & ((k3_finseq_1 X3 = k3_finseq_1 X1) \wedge ((k1_matrix_1 X3 = k1_matrix_1 \\ & X1) \wedge (\forall X4.(v7_ordinal1 X4) \Rightarrow (\forall X5.(v7_ordinal1 X5) \Rightarrow \\ & ((k4_tarski X4 X5 \in k2_matrix_1 X1) \Rightarrow (k3_matrix_1 (u1_struct_0 \\ & X0) X3 X4 X5 = k3_rlvect_1 X0 (k3_matrix_1 (u1_struct_0 X0) X1 X4 X5) \\ & (k3_matrix_1 (u1_struct_0 X0) X2 X4 X5)))))))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 (u1_struct_0 k2_vectsp_1)))) \Rightarrow (k2_matrixr1 X0 = X0) \quad (14)$$

Assume the following.

$$\forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow (k1_matrixr1 X0 = X0) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\ & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\ & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ & ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\ & X0)))) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\ & (u1_struct_0 X0)))) \Rightarrow (k1_matrix_4 X0 X1 X2 = k3_matrix_3 X0 X1 (k2_matrix_3 \\ & X0 X2)))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.(v6_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v7_ordinal1 X1)) \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & (\forall X1.((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & (((k3_finseq_1 X0 = k3_finseq_1 X1) \wedge (k1_matrix_1 X0 = k1_matrix_1 \\ & X1)) \Rightarrow ((k3_finseq_1 (k5_matrixr1 X0 X1) = k3_finseq_1 X0) \wedge ((k1_matrix_1 \\ & (k5_matrixr1 X0 X1) = k1_matrix_1 X0) \wedge (\forall X2.(m1_subset_1 \\ & X2 k5_numbers) \Rightarrow (\forall X3.(m1_subset_1 X3 k5_numbers) \Rightarrow ((k4_tarski \\ & X2 X3 \in k2_matrix_1 X0) \Rightarrow (k3_matrix_1 k1_numbers (k5_matrixr1 X0 \\ & X1) X2 X3 = k9_real_1 (k3_matrix_1 k1_numbers X0 X2 X3) (k3_matrix_1 \\ & k1_numbers X1 X2 X3)))))))))) \end{aligned}$$