

t13_matrixc1

(TMbhg9yCAbNTcbA3GT1hqJ9GXinm6QDvNxp)

October 27, 2020

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 $k2_numbers : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k5_matrix_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_complfld : \iota$ be given. Let $k1_matrix_5 : \iota \Rightarrow \iota$ be given. Let $k2_matrix_5 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v3_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $v6_vectsp_1 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ 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 $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $k2_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrix_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 (u1_struct_0 k1_complfld)))) \Rightarrow (X0 = k1_matrix_5 (k2_matrix_5 X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (2)$$

Assume the following.

$$\begin{aligned} & (\neg v6_struct_0 k1_complfld) \wedge ((v13_algstr_0 k1_complfld) \wedge ((\\ & v33_algstr_0 k1_complfld) \wedge ((v36_algstr_0 k1_complfld) \wedge ((v3_group_1 \\ & k1_complfld) \wedge ((v5_group_1 k1_complfld) \wedge ((v3_vectsp_1 k1_complfld) \wedge \\ & ((v5_vectsp_1 k1_complfld) \wedge ((v6_vectsp_1 k1_complfld) \wedge ((v2_rlvect_1 \\ & k1_complfld) \wedge ((v3_rlvect_1 k1_complfld) \wedge (v4_rlvect_1 k1_complfld)))))))))) \quad (3) \end{aligned}$$

Assume the following.

$$(v36_algstr_0 k1_complfld) \wedge (v4_vectsp_1 k1_complfld) \quad (4)$$

Assume the following.

$$(\neg v2_struct_0 \ k1_complfld) \wedge (v36_algstr_0 \ k1_complfld) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. & (((v1_matrix_1 \ X0) \wedge (m1_finseq_1 \ X0 \ (k3_finseq_2 \\ & k2_numbers))) \wedge ((v1_matrix_1 \ X1) \wedge (m1_finseq_1 \ X1 \ (k3_finseq_2 \\ & k2_numbers)))) \Rightarrow ((v1_matrix_1 \ (k5_matrix_5 \ X0 \ X1)) \wedge (m2_finseq_1 \\ & (k5_matrix_5 \ X0 \ X1) \ (k3_finseq_2 \ k2_numbers))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. & (((\neg v2_struct_0 \ X0) \wedge ((\neg v6_struct_0 \ X0) \wedge \\ & ((v13_algstr_0 \ X0) \wedge (v33_algstr_0 \ X0) \wedge (v3_group_1 \ X0) \wedge (v5_group_1 \\ & X0) \wedge (v2_rlvect_1 \ X0) \wedge (v3_rlvect_1 \ X0) \wedge (v4_rlvect_1 \ X0) \wedge \\ & ((v4_vectsp_1 \ X0) \wedge (v5_vectsp_1 \ X0) \wedge (l6_algstr_0 \ X0)))))) \wedge \\ & ((v1_matrix_1 \ X1) \wedge (m1_finseq_1 \ X1 \ (k3_finseq_2 \ (u1_struct_0 \\ & X0)))) \Rightarrow ((v1_matrix_1 \ (k2_matrix_3 \ X0 \ X1)) \wedge (m2_finseq_1 \ (k2_matrix_3 \\ & X0 \ X1) \ (k3_finseq_2 \ (u1_struct_0 \ X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. & ((v1_matrix_1 \ X0) \wedge (m1_finseq_1 \ X0 \ (k3_finseq_2 \ k2_numbers))) \Rightarrow \\ & ((v1_matrix_1 \ (k1_matrix_5 \ X0)) \wedge (m2_finseq_1 \ (k1_matrix_5 \ X0) \\ & (k3_finseq_2 \ (u1_struct_0 \ k1_complfld)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. & (((\neg v2_struct_0 \ X0) \wedge ((\neg v6_struct_0 \\ & X0) \wedge ((v13_algstr_0 \ X0) \wedge (v33_algstr_0 \ X0) \wedge (v3_group_1 \ X0) \wedge \\ & (v5_group_1 \ X0) \wedge (v2_rlvect_1 \ X0) \wedge (v3_rlvect_1 \ X0) \wedge (v4_rlvect_1 \\ & X0) \wedge (v4_vectsp_1 \ X0) \wedge (v5_vectsp_1 \ X0) \wedge (l6_algstr_0 \ X0)))))) \wedge \\ & (((v1_matrix_1 \ X1) \wedge (m1_finseq_1 \ X1 \ (k3_finseq_2 \ (u1_struct_0 \\ & X0)))) \wedge ((v1_matrix_1 \ X2) \wedge (m1_finseq_1 \ X2 \ (k3_finseq_2 \ (u1_struct_0 \\ & X0)))))) \Rightarrow ((v1_matrix_1 \ (k1_matrix_4 \ X0 \ X1 \ X2)) \wedge (m2_finseq_1 \\ & (k1_matrix_4 \ X0 \ X1 \ X2) \ (k3_finseq_2 \ (u1_struct_0 \ X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$(v36_algstr_0 \ k1_complfld) \wedge (l6_algstr_0 \ k1_complfld) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0. & ((v1_matrix_1 \ X0) \wedge (m2_finseq_1 \ X0 \ (k3_finseq_2 \ k2_numbers))) \Rightarrow \\ & (\forall X1. ((v1_matrix_1 \ X1) \wedge (m2_finseq_1 \ X1 \ (k3_finseq_2 \ k2_numbers))) \Rightarrow \\ & (k5_matrix_5 \ X0 \ X1 = k2_matrix_5 \ (k1_matrix_4 \ k1_complfld \ (k1_matrix_5 \\ & X0) \ (k1_matrix_5 \ X1)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
& (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\
& X0)))) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\
& (u1_struct_0 X0)))) \Rightarrow (\forall X3.((v1_matrix_1 X3) \wedge (m2_finseq_1 \\
& X3 (k3_finseq_2 (u1_struct_0 X0)))) \Rightarrow ((X3 = k3_matrix_3 X0 X1 X2) \Leftrightarrow \\
& ((k3_finseq_1 X3 = k3_finseq_1 X1) \wedge ((k1_matrix_1 X3 = k1_matrix_1 \\
& X1) \wedge (\forall X4.(v7_ordinal1 X4) \Rightarrow (\forall X5.(v7_ordinal1 X5) \Rightarrow \\
& ((k4_tarski X4 X5 \in k2_matrix_1 X1) \Rightarrow (k3_matrix_1 (u1_struct_0 \\
& X0) X3 X4 X5 = k3_rlvect_1 X0 (k3_matrix_1 (u1_struct_0 X0) X1 X4 X5) \\
& (k3_matrix_1 (u1_struct_0 X0) X2 X4 X5))))))))))
\end{aligned} \tag{12}$$

Assume the following.

$$\forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k2_numbers))) \Rightarrow (k1_matrix_5 X0 = X0) \tag{13}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
& (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\
& X0)))) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\
& (u1_struct_0 X0)))) \Rightarrow (k1_matrix_4 X0 X1 X2 = k3_matrix_3 X0 X1 (k2_matrix_3 \\
& X0 X2)))
\end{aligned} \tag{14}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k2_numbers))) \Rightarrow \\
& (\forall X1.((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k2_numbers))) \Rightarrow \\
& ((k3_finseq_1 (k5_matrix_5 X0 X1) = k3_finseq_1 X0) \wedge (k1_matrix_1 \\
& (k5_matrix_5 X0 X1) = k1_matrix_1 X0)))
\end{aligned}$$