

t19_matrix_4

(TMJThw3g1nd5yFu1ePiPhdgtJFyGrXb8dej)

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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 $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
 & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
 & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
 & ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\
 & X0)))) \Rightarrow (\forall X2. ((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\
 & (u1_struct_0 X0)))) \Rightarrow (\forall X3. ((v1_matrix_1 X3) \wedge (m2_finseq_1 \\
 & X3 (k3_finseq_2 (u1_struct_0 X0)))) \Rightarrow (((k3_finseq_1 X1 = k3_finseq_1 \\
 & X2) \wedge ((k3_finseq_1 X2 = k3_finseq_1 X3) \wedge ((k1_matrix_1 X1 = k1_matrix_1 \\
 & X2) \wedge (k1_matrix_1 X2 = k1_matrix_1 X3)))) \Rightarrow (k1_matrix_4 X0 (k1_matrix_4 \\
 & X0 X3 X1) (k1_matrix_4 X0 X3 X2) = k1_matrix_4 X0 X2 X1))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
& (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\
& X0)))) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\
& (u1_struct_0 X0)))) \Rightarrow (\forall X3.((v1_matrix_1 X3) \wedge (m2_finseq_1 \\
& X3 (k3_finseq_2 (u1_struct_0 X0)))) \Rightarrow (((k3_finseq_1 X1 = k3_finseq_1 \\
& X2) \wedge ((k3_finseq_1 X2 = k3_finseq_1 X3) \wedge ((k1_matrix_1 X1 = k1_matrix_1 \\
& X2) \wedge (k1_matrix_1 X2 = k1_matrix_1 X3)))) \Rightarrow (k1_matrix_4 X0 X1 X3 = \\
& k1_matrix_4 X0 (k1_matrix_4 X0 X1 X2) (k1_matrix_4 X0 X3 X2)))))) \\
& \tag{2}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
& (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\
& X0)))) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\
& (u1_struct_0 X0)))) \Rightarrow (\forall X3.((v1_matrix_1 X3) \wedge (m2_finseq_1 \\
& X3 (k3_finseq_2 (u1_struct_0 X0)))) \Rightarrow (\forall X4.((v1_matrix_1 \\
& X4) \wedge (m2_finseq_1 X4 (k3_finseq_2 (u1_struct_0 X0)))) \Rightarrow (((k3_finseq_1 \\
& X1 = k3_finseq_1 X2) \wedge ((k3_finseq_1 X2 = k3_finseq_1 X3) \wedge ((k3_finseq_1 \\
& X3 = k3_finseq_1 X4) \wedge ((k1_matrix_1 X1 = k1_matrix_1 X2) \wedge ((k1_matrix_1 \\
& X2 = k1_matrix_1 X3) \wedge ((k1_matrix_1 X3 = k1_matrix_1 X4) \wedge (k1_matrix_4 \\
& X0 X1 X2 = k1_matrix_4 X0 X3 X4)))))) \Rightarrow (k1_matrix_4 X0 X1 X3 = k1_matrix_4 \\
& X0 X2 X4))))))
\end{aligned}$$