

t21_matrix_4

(TMMkB3CcVbzYSrbeKXUxoVCGw9NboaYF4hn)

October 27, 2020

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. Let $k3_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
 & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
 & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
 & ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\
 & X0)))) \Rightarrow (\forall X2. ((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\
 & (u1_struct_0 X0)))) \Rightarrow (\forall X3. ((v1_matrix_1 X3) \wedge (m2_finseq_1 \\
 & X3 (k3_finseq_2 (u1_struct_0 X0)))) \Rightarrow (((k3_finseq_1 X1 = k3_finseq_1 \\
 & X2) \wedge (k1_matrix_1 X1 = k1_matrix_1 X2)) \Rightarrow (k3_matrix_3 X0 (k3_matrix_3 \\
 & X0 X1 X2) X3 = k3_matrix_3 X0 X1 (k3_matrix_3 X0 X2 X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
 & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
 & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
 & ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\
 & X0)))) \Rightarrow (\forall X2. ((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\
 & (u1_struct_0 X0)))) \Rightarrow (((k3_finseq_1 X1 = k3_finseq_1 X2) \wedge (k1_matrix_1 \\
 & X1 = k1_matrix_1 X2)) \Rightarrow (X1 = k3_matrix_3 X0 X1 (k1_matrix_4 X0 X2 X2))))))
 \end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 \\ & X0)\wedge((v13_algstr_0 X0)\wedge((v33_algstr_0 X0)\wedge((v3_group_1 X0)\wedge \\ & ((v5_group_1 X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 \\ & X0)\wedge((v4_vectsp_1 X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 X0))))))))))\wedge \\ & (((v1_matrix_1 X1)\wedge(m1_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\ & X0))))\wedge((v1_matrix_1 X2)\wedge(m1_finseq_1 X2 (k3_finseq_2 (u1_struct_0 \\ & X0))))))\Rightarrow((v1_matrix_1 (k3_matrix_3 X0 X1 X2))\wedge(m2_finseq_1 \\ & (k3_matrix_3 X0 X1 X2) (k3_finseq_2 (u1_struct_0 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 X0)\wedge \\ & ((v13_algstr_0 X0)\wedge((v33_algstr_0 X0)\wedge((v3_group_1 X0)\wedge((v5_group_1 \\ & X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge \\ & ((v4_vectsp_1 X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 X0))))))))))\wedge \\ & ((v1_matrix_1 X1)\wedge(m1_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\ & X0))))\Rightarrow((v1_matrix_1 (k2_matrix_3 X0 X1))\wedge(m2_finseq_1 (k2_matrix_3 \\ & X0 X1) (k3_finseq_2 (u1_struct_0 X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 X0)\wedge((v13_algstr_0 \\ & X0)\wedge((v33_algstr_0 X0)\wedge((v3_group_1 X0)\wedge((v5_group_1 X0)\wedge \\ & (v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v4_vectsp_1 \\ & X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 X0))))))))))\Rightarrow(\forall X1. \\ & ((v1_matrix_1 X1)\wedge(m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\ & X0))))\Rightarrow(\forall X2.((v1_matrix_1 X2)\wedge(m2_finseq_1 X2 (k3_finseq_2 \\ & (u1_struct_0 X0))))\Rightarrow(k1_matrix_4 X0 X1 X2 = k3_matrix_3 X0 X1 (k2_matrix_3 \\ & X0 X2)))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.(((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 X0)\wedge((v13_algstr_0 \\ & X0)\wedge((v33_algstr_0 X0)\wedge((v3_group_1 X0)\wedge((v5_group_1 X0)\wedge \\ & (v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v4_vectsp_1 \\ & X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 X0))))))))))\Rightarrow(\forall X1. \\ & ((v1_matrix_1 X1)\wedge(m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\ & X0))))\Rightarrow(\forall X2.((v1_matrix_1 X2)\wedge(m2_finseq_1 X2 (k3_finseq_2 \\ & (u1_struct_0 X0))))\Rightarrow(((k3_finseq_1 X1 = k3_finseq_1 X2)\wedge(k1_matrix_1 \\ & X1 = k1_matrix_1 X2))\Rightarrow(X1 = k1_matrix_4 X0 (k3_matrix_3 X0 X1 X2) \\ & X2)))) \end{aligned}$$