

t39_matrlin2

(TMbH2hPVeWsNyce14vN6YS2MarnixWU9eb2)

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 $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ 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 $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $v8_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v9_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v10_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v11_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_matrlin : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_matrlin : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_matrlin2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrlin2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
 & ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 X0) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v1_matrlin X1 X0) \wedge (l1_vectsp_1 X1 X0)))))))))) \Rightarrow (\forall X2. \\
 & ((\neg v2_struct_0 X2) \wedge ((v13_algstr_0 X2) \wedge ((v8_vectsp_1 X2 X0) \wedge ((v9_vectsp_1 X2 X0) \wedge ((v10_vectsp_1 X2 X0) \wedge ((v11_vectsp_1 X2 X0) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 X2) \wedge ((v1_matrlin X2 X0) \wedge (l1_vectsp_1 X2 X0)))))))))) \Rightarrow (\forall X3. \\
 & (m1_matrlin X3 X0 X1) \Rightarrow (\forall X4. (m1_matrlin X4 X0 X2) \Rightarrow (\forall X5. \\
 & (m1_matrix_1 X5 (u1_struct_0 X0) (k3_finseq_1 X3) (k3_finseq_1 X4) \Rightarrow (k1_matrlin2 X0 X1 X2 (k4_matrlin2 X0 X1 X2 X3 X4 X5) X3 X4 = X5))))))
 \end{aligned}$$

(1)

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (\neg v6_struct_0 X0) \wedge \\ & ((v13_algstr_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 \\ & X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\ & ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \wedge \\ & ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge \\ & ((v9_vectsp_1 X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 \\ & X0) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge \\ & ((v1_matrlin X1 X0) \wedge (l1_vectsp_1 X1 X0)))))))))) \Rightarrow (\forall X2. \\ & (m1_matrlin X2 X0 X1) \Rightarrow (m2_finseq_1 X2 (u1_struct_0 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & (((\neg v2_struct_0 X0) \wedge (\neg v6_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge \\ & ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\ & X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\ & ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \wedge (((\neg v2_struct_0 \\ & X1) \wedge ((v13_algstr_0 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 X1 \\ & X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 X0) \wedge ((v2_rlvect_1 \\ & X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v1_matrlin X1 X0) \wedge \\ & (l1_vectsp_1 X1 X0)))))))))) \wedge (((\neg v2_struct_0 X2) \wedge ((v13_algstr_0 \\ & X2) \wedge ((v8_vectsp_1 X2 X0) \wedge ((v9_vectsp_1 X2 X0) \wedge ((v10_vectsp_1 \\ & X2 X0) \wedge ((v11_vectsp_1 X2 X0) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 \\ & X2) \wedge ((v4_rlvect_1 X2) \wedge ((v1_matrlin X2 X0) \wedge (l1_vectsp_1 X2 X0)))))))))) \wedge \\ & ((m1_matrlin X3 X0 X1) \wedge ((m1_finseq_1 X4 (u1_struct_0 X2)) \wedge (m1_matrix_1 \\ & X5 (u1_struct_0 X0) (k3_finseq_1 X3) (k3_finseq_1 X4)))))) \Rightarrow (\\ & (v1_funct_1 (k4_matrlin2 X0 X1 X2 X3 X4 X5) \wedge ((v1_funct_2 (k4_matrlin2 \\ & X0 X1 X2 X3 X4 X5) (u1_struct_0 X1) (u1_struct_0 X2)) \wedge (m1_subset_1 \\ & (k4_matrlin2 X0 X1 X2 X3 X4 X5) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X1) (u1_struct_0 X2)))))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (\neg v6_struct_0 X0) \wedge (v13_algstr_0 \\
& X0) \wedge (v33_algstr_0 X0) \wedge (v3_group_1 X0) \wedge (v5_group_1 X0) \wedge \\
& (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (v2_rlvect_1 X0) \wedge (v3_rlvect_1 \\
& X0) \wedge (v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v8_vectsp_1 X1 X0) \wedge \\
& (v9_vectsp_1 X1 X0) \wedge (v10_vectsp_1 X1 X0) \wedge (v11_vectsp_1 X1 \\
& X0) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge \\
& (v1_matrlin X1 X0) \wedge (l1_vectsp_1 X1 X0)))))) \Rightarrow (\forall X2. \\
& ((\neg v2_struct_0 X2) \wedge (v13_algstr_0 X2) \wedge (v8_vectsp_1 X2 X0) \wedge \\
& (v9_vectsp_1 X2 X0) \wedge (v10_vectsp_1 X2 X0) \wedge (v11_vectsp_1 X2 \\
& X0) \wedge (v2_rlvect_1 X2) \wedge (v3_rlvect_1 X2) \wedge (v4_rlvect_1 X2) \wedge \\
& (v1_matrlin X2 X0) \wedge (l1_vectsp_1 X2 X0)))))) \Rightarrow (\forall X3. \\
& (m1_matrlin X3 X0 X1) \Rightarrow (\forall X4. (m1_matrlin X4 X0 X2) \Rightarrow (\forall X5. \\
& (m1_matrix_1 X5 (u1_struct_0 X0) (k3_finseq_1 X3) (k3_finseq_1 \\
& X4) \Rightarrow (\forall X6. (m1_matrix_1 X6 (u1_struct_0 X0) (k3_finseq_1 \\
& X3) (k3_finseq_1 X4) \Rightarrow ((r2_funct_2 (u1_struct_0 X1) (u1_struct_0 \\
& X2) (k4_matrlin2 X0 X1 X2 X3 X4 X5) (k4_matrlin2 X0 X1 X2 X3 X4 X6) \Rightarrow \\
& (X5 = X6)))))))))
\end{aligned}$$