

t3_matrixc1

(TMFBgiLBdsLx9yxSqsK4x7P2Ub9ZhVzjFuf)

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Let $v1_xcmplx_0 : \iota \Rightarrow o$ 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 $k2_numbers : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k7_matrix_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k2_matrix_5 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_5 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $k1_complfld : \iota$ 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 $v3_group_1 : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k27_binop_2 : \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k29_binop_2 : \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_complex1 : \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_complex1 : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k2_numbers))) \Rightarrow \\ (X0 = k2_matrix_5 (k1_matrix_5 X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{3}$$

Assume the following.

$$\begin{aligned}
& (\neg v6_struct_0 \ k1_complfld) \wedge ((v13_algstr_0 \ k1_complfld) \wedge ((\\
& \quad v33_algstr_0 \ k1_complfld) \wedge ((v36_algstr_0 \ k1_complfld) \wedge ((v3_group_1 \\
& \quad k1_complfld) \wedge ((v5_group_1 \ k1_complfld) \wedge ((v3_vectsp_1 \ k1_complfld) \wedge \\
& \quad ((v5_vectsp_1 \ k1_complfld) \wedge ((v6_vectsp_1 \ k1_complfld) \wedge ((v2_rlvect_1 \\
& \quad k1_complfld) \wedge ((v3_rlvect_1 \ k1_complfld) \wedge (v4_rlvect_1 \ k1_complfld)))))))))) \\
& \hspace{15em} (4)
\end{aligned}$$

Assume the following.

$$(v36_algstr_0 \ k1_complfld) \wedge (v4_vectsp_1 \ k1_complfld) \hspace{10em} (5)$$

Assume the following.

$$(\neg v2_struct_0 \ k1_complfld) \wedge (v36_algstr_0 \ k1_complfld) \hspace{10em} (6)$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_xcmplx_0 \ X0) \wedge ((v1_matrix_1 \ X1) \wedge (\\
& \quad m1_finseq_1 \ X1 \ (k3_finseq_2 \ k2_numbers)))) \Rightarrow ((v1_matrix_1 \ (k7_matrix_5 \\
& \quad X0 \ X1)) \wedge (m2_finseq_1 \ (k7_matrix_5 \ X0 \ X1) \ (k3_finseq_2 \ k2_numbers))) \\
& \hspace{15em} (7)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 \ X0) \wedge ((\neg v6_struct_0 \\
& \quad X0) \wedge ((v13_algstr_0 \ X0) \wedge ((v33_algstr_0 \ X0) \wedge ((v3_group_1 \ X0) \wedge \\
& \quad ((v5_group_1 \ X0) \wedge ((v2_rlvect_1 \ X0) \wedge ((v3_rlvect_1 \ X0) \wedge ((v4_rlvect_1 \\
& \quad X0) \wedge ((v4_vectsp_1 \ X0) \wedge ((v5_vectsp_1 \ X0) \wedge (l6_algstr_0 \ X0)))))))))) \wedge \\
& \quad (((v1_matrix_1 \ X1) \wedge (m1_finseq_1 \ X1 \ (k3_finseq_2 \ (u1_struct_0 \\
& \quad X0)))) \wedge (m1_subset_1 \ X2 \ (u1_struct_0 \ X0))) \Rightarrow ((v1_matrix_1 \ (k6_matrix_3 \\
& \quad X0 \ X1 \ X2)) \wedge (m2_finseq_1 \ (k6_matrix_3 \ X0 \ X1 \ X2) \ (k3_finseq_2 \ (u1_struct_0 \\
& \quad X0)))) \\
& \hspace{15em} (8)
\end{aligned}$$

Assume the following.

$$(v36_algstr_0 \ k1_complfld) \wedge (l6_algstr_0 \ k1_complfld) \hspace{10em} (9)$$

Assume the following.

$$\begin{aligned}
& \forall X0. (v1_xcmplx_0 \ X0) \Rightarrow (\forall X1. ((v1_matrix_1 \ X1) \wedge (\\
& \quad m2_finseq_1 \ X1 \ (k3_finseq_2 \ k2_numbers))) \Rightarrow (\forall X2. ((v1_matrix_1 \\
& \quad X2) \wedge (m2_finseq_1 \ X2 \ (k3_finseq_2 \ k2_numbers))) \Rightarrow ((X2 = k7_matrix_5 \\
& \quad X0 \ X1) \Leftrightarrow (\forall X3. (m1_subset_1 \ X3 \ (u1_struct_0 \ k1_complfld)) \Rightarrow \\
& \quad ((X3 = X0) \Rightarrow (X2 = k2_matrix_5 \ (k6_matrix_3 \ k1_complfld \ (k1_matrix_5 \\
& \quad X1 \ X3)))))) \\
& \hspace{15em} (10)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
& (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\
& X0)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
& ((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 (u1_struct_0 \\
& X0)))) \Rightarrow ((X3 = k6_matrix_3 X0 X1 X2) \Leftrightarrow ((k3_finseq_1 X3 = k3_finseq_1 \\
& X1) \wedge ((k1_matrix_1 X3 = k1_matrix_1 X1) \wedge (\forall X4.(v7_ordinal1 \\
& X4) \Rightarrow (\forall X5.(v7_ordinal1 X5) \Rightarrow ((k4_tarski X4 X5 \in k2_matrix_1 \\
& X1) \Rightarrow (k3_matrix_1 (u1_struct_0 X0) X3 X4 X5 = k8_group_1 X0 X2 (k3_matrix_1 \\
& (u1_struct_0 X0) X1 X4 X5))))))))))
\end{aligned} \tag{11}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Leftrightarrow (X0 \in k2_numbers) \tag{12}$$

Assume the following.

$$\forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 (u1_struct_0 \\
k1_complfld)))) \Rightarrow (k2_matrix_5 X0 = X0) \tag{13}$$

Assume the following.

$$\forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k2_numbers))) \Rightarrow \\
(k1_matrix_5 X0 = X0) \tag{14}$$

Assume the following.

$$\forall X0.((v36_algstr_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow ((X0 = k1_complfld) \Leftrightarrow \\
((u1_struct_0 X0 = k2_numbers) \wedge ((u1_algstr_0 X0 = k27_binop_2) \wedge \\
((u2_algstr_0 X0 = k29_binop_2) \wedge ((k5_struct_0 X0 = k6_complex1) \wedge \\
(k4_struct_0 X0 = k5_complex1)))))) \tag{15}$$

Theorem 1

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge (\\
m2_finseq_1 X1 (k3_finseq_2 k2_numbers))) \Rightarrow ((k3_finseq_1 (k7_matrix_5 \\
X0 X1) = k3_finseq_1 X1) \wedge (k1_matrix_1 (k7_matrix_5 X0 X1) = k1_matrix_1 \\
X1)))$$