

t35_matrixr1
(TMY6sHJ4avnGDfiupd3xrLW9iBJ9EMv4ZPp)

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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 $k1_numbers : \iota$ be given. Let $k5_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_matrixr1 : \iota \Rightarrow \iota$ be given. Let $k3_matrixr1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k13_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_vectsp_1 : \iota$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_vectsp_1 : \iota \Rightarrow o$ be given. Let $v6_vectsp_1 : \iota \Rightarrow o$ be given. Let $k3_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrixr1 : \iota \Rightarrow \iota$ be given. Let $g6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k33_binop_2 : \iota$ be given. Let $k35_binop_2 : \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_matrixr1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge \\ & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\ & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ & ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\ & X0)))) \Rightarrow (k2_matrix_3 X0 (k2_matrix_3 X0 X1) = X1)) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\forall X0. k3_finseq_2 X0 = k13_finseq_1 X0 \quad (3)$$

Assume the following.

$$\begin{aligned} & (\neg v6_struct_0 \ k2_vectsp_1) \wedge ((v13_algstr_0 \ k2_vectsp_1) \wedge ((\\ & v33_algstr_0 \ k2_vectsp_1) \wedge ((v36_algstr_0 \ k2_vectsp_1) \wedge ((v2_rlvect_1 \\ & k2_vectsp_1) \wedge ((v3_rlvect_1 \ k2_vectsp_1) \wedge ((v4_rlvect_1 \ k2_vectsp_1) \wedge \\ & ((v3_group_1 \ k2_vectsp_1) \wedge ((v5_group_1 \ k2_vectsp_1) \wedge ((v3_vectsp_1 \\ & k2_vectsp_1) \wedge ((v5_vectsp_1 \ k2_vectsp_1) \wedge (v6_vectsp_1 \ k2_vectsp_1)))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$(v36_algstr_0 \ k2_vectsp_1) \wedge (v4_vectsp_1 \ k2_vectsp_1) \quad (5)$$

Assume the following.

$$(\neg v2_struct_0 \ k2_vectsp_1) \wedge (v36_algstr_0 \ k2_vectsp_1) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_matrix_1 \ X0) \wedge (m1_finseq_1 \ X0 \ (k3_finseq_2 \ k1_numbers))) \Rightarrow \\ ((v1_matrix_1 \ (k4_matrixr1 \ X0)) \wedge (m2_finseq_1 \ (k4_matrixr1 \ X0) \\ (k3_finseq_2 \ k1_numbers))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v1_matrix_1 \ X0) \wedge (m1_finseq_1 \ X0 \ (k3_finseq_2 \\ k1_numbers))) \wedge ((v1_matrix_1 \ X1) \wedge (m1_finseq_1 \ X1 \ (k3_finseq_2 \\ k1_numbers)))) \Rightarrow ((v1_matrix_1 \ (k3_matrixr1 \ X0 \ X1)) \wedge (m2_finseq_1 \\ (k3_matrixr1 \ X0 \ X1) \ (k3_finseq_2 \ k1_numbers))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 \ X0) \wedge ((\neg v6_struct_0 \\ X0) \wedge ((v13_algstr_0 \ X0) \wedge ((v33_algstr_0 \ X0) \wedge ((v3_group_1 \ X0) \wedge \\ ((v5_group_1 \ X0) \wedge ((v2_rlvect_1 \ X0) \wedge ((v3_rlvect_1 \ X0) \wedge ((v4_rlvect_1 \\ X0) \wedge ((v4_vectsp_1 \ X0) \wedge ((v5_vectsp_1 \ X0) \wedge (l6_algstr_0 \ X0)))))))))) \wedge \\ (((v1_matrix_1 \ X1) \wedge (m1_finseq_1 \ X1 \ (k3_finseq_2 \ (u1_struct_0 \\ X0)))) \wedge ((v1_matrix_1 \ X2) \wedge (m1_finseq_1 \ X2 \ (k3_finseq_2 \ (u1_struct_0 \\ X0)))))) \Rightarrow ((v1_matrix_1 \ (k3_matrix_3 \ X0 \ X1 \ X2)) \wedge (m2_finseq_1 \\ (k3_matrix_3 \ X0 \ X1 \ X2) \ (k3_finseq_2 \ (u1_struct_0 \ X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$(v36_algstr_0 \ k2_vectsp_1) \wedge (l6_algstr_0 \ k2_vectsp_1) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (\neg v6_struct_0 X0) \wedge \\ & ((v13_algstr_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 \\ & X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\ & ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \wedge \\ & ((v1_matrix_1 X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\ & X0)))) \Rightarrow ((v1_matrix_1 (k2_matrix_3 X0 X1) \wedge (m2_finseq_1 (k2_matrix_3 \\ & X0 X1) (k3_finseq_2 (u1_struct_0 X0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_matrix_1 X0) \wedge (m1_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & ((v1_matrix_1 (k1_matrixr1 X0) \wedge (m2_finseq_1 (k1_matrixr1 X0) \\ & (k3_finseq_2 (u1_struct_0 k2_vectsp_1)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & k2_vectsp_1 = g6_algstr_0 k1_numbers k33_binop_2 k35_binop_2 \\ & \quad \quad \quad np_1 k6_numbers \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & (\forall X1. ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & (k5_matrixr1 X0 X1 = k2_matrixr1 (k1_matrix_4 k2_vectsp_1 (k1_matrixr1 \\ & X0) (k1_matrixr1 X1)))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & (k4_matrixr1 X0 = k2_matrixr1 (k2_matrix_3 k2_vectsp_1 (k1_matrixr1 \\ & X0))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & (\forall X1. ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & (k3_matrixr1 X0 X1 = k2_matrixr1 (k3_matrix_3 k2_vectsp_1 (k1_matrixr1 \\ & X0) (k1_matrixr1 X1)))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 (u1_struct_0 \\ & k2_vectsp_1)))) \Rightarrow (k2_matrixr1 X0 = X0) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & (k1_matrixr1 X0 = X0) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge \\
& (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\
& X0)))) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\
& (u1_struct_0 X0)))) \Rightarrow (k1_matrix_4 X0 X1 X2 = k3_matrix_3 X0 X1 (k2_matrix_3 \\
& X0 X2))))
\end{aligned} \tag{19}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow \\
& (\forall X1.((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k1_numbers))) \Rightarrow \\
& (k5_matrixr1 X0 (k4_matrixr1 X1) = k3_matrixr1 X0 X1))
\end{aligned}$$