

t49_matrix_6 (TMZLR-
Mgp6sWmUCH9Qh1dMxS4ZUZc7MENm5L)

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Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $m1_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k2_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
 & ((\neg v6_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v33_algstr_0 X1) \wedge \\
 & (v3_group_1 X1) \wedge (v5_group_1 X1) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 \\
 & X1) \wedge (v4_rlvect_1 X1) \wedge (v4_vectsp_1 X1) \wedge (v5_vectsp_1 X1) \wedge \\
 & (l6_algstr_0 X1)))))) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\
 & X1) X0 X0) \Rightarrow (\forall X3.(m1_matrix_1 X3 (u1_struct_0 X1) X0 X0) \Rightarrow \\
 & (\forall X4.(m1_matrix_1 X4 (u1_struct_0 X1) X0 X0) \Rightarrow (((r1_matrix_6 \\
 & X0 X1 X2 X3) \wedge (r1_matrix_6 X0 X1 X2 X4) \Rightarrow ((r1_xxreal_0 X0 k6_numbers) \vee \\
 & (r1_matrix_6 X0 X1 X2 (k2_matrix_6 X0 X1 X3 X4)))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.\forall X1.\forall X2.\forall X3.((v7_ordinal1 X0) \wedge \\
 & (((\neg v2_struct_0 X1) \wedge ((\neg v6_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge \\
 & (v33_algstr_0 X1) \wedge (v3_group_1 X1) \wedge (v5_group_1 X1) \wedge (v2_rlvect_1 \\
 & X1) \wedge (v3_rlvect_1 X1) \wedge (v4_rlvect_1 X1) \wedge (v4_vectsp_1 X1) \wedge \\
 & (v5_vectsp_1 X1) \wedge (l6_algstr_0 X1)))))) \wedge ((m1_matrix_1 \\
 & X2 (u1_struct_0 X1) X0 X0) \wedge (m1_matrix_1 X3 (u1_struct_0 X1) X0 X0)) \Rightarrow \\
 & ((r1_matrix_6 X0 X1 X2 X3) \Rightarrow (r1_matrix_6 X0 X1 X3 X2))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v7_ordinal1\ X0)\wedge \\
& (((\neg v2_struct_0\ X1)\wedge(\neg v6_struct_0\ X1)\wedge((v13_algstr_0\ X1)\wedge \\
& ((v33_algstr_0\ X1)\wedge((v3_group_1\ X1)\wedge((v5_group_1\ X1)\wedge((v2_rlvect_1 \\
& X1)\wedge((v3_rlvect_1\ X1)\wedge((v4_rlvect_1\ X1)\wedge((v4_vectsp_1\ X1)\wedge \\
& ((v5_vectsp_1\ X1)\wedge(l6_algstr_0\ X1))))))))))\wedge((m1_matrix_1 \\
& X2\ (u1_struct_0\ X1)\ X0\ X0)\wedge(m1_matrix_1\ X3\ (u1_struct_0\ X1)\ X0\ X0)))\Rightarrow \\
& (m1_matrix_1\ (k2_matrix_6\ X0\ X1\ X2\ X3)\ (u1_struct_0\ X1)\ X0\ X0)
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2_struct_0\ X1)\wedge \\
& ((\neg v6_struct_0\ X1)\wedge((v13_algstr_0\ X1)\wedge((v33_algstr_0\ X1)\wedge(\\
& (v3_group_1\ X1)\wedge((v5_group_1\ X1)\wedge((v2_rlvect_1\ X1)\wedge((v3_rlvect_1 \\
& X1)\wedge((v4_rlvect_1\ X1)\wedge((v4_vectsp_1\ X1)\wedge((v5_vectsp_1\ X1)\wedge \\
& (l6_algstr_0\ X1))))))))))\Rightarrow(\forall X2.(m1_matrix_1\ X2\ (u1_struct_0 \\
& X1)\ X0\ X0)\Rightarrow(\forall X3.(m1_matrix_1\ X3\ (u1_struct_0\ X1)\ X0\ X0)\Rightarrow \\
& ((r1_matrix_6\ X0\ X1\ X2\ X3)\Leftrightarrow(k4_matrix_3\ X1\ X2\ X3 = k4_matrix_3\ X1 \\
& X3\ X2))))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2_struct_0\ X1)\wedge \\
& ((\neg v6_struct_0\ X1)\wedge((v13_algstr_0\ X1)\wedge((v33_algstr_0\ X1)\wedge(\\
& (v3_group_1\ X1)\wedge((v5_group_1\ X1)\wedge((v2_rlvect_1\ X1)\wedge((v3_rlvect_1 \\
& X1)\wedge((v4_rlvect_1\ X1)\wedge((v4_vectsp_1\ X1)\wedge((v5_vectsp_1\ X1)\wedge \\
& (l6_algstr_0\ X1))))))))))\Rightarrow(\forall X2.(m1_matrix_1\ X2\ (u1_struct_0 \\
& X1)\ X0\ X0)\Rightarrow(\forall X3.(m1_matrix_1\ X3\ (u1_struct_0\ X1)\ X0\ X0)\Rightarrow \\
& ((r1_matrix_6\ X0\ X1\ X2\ X3)\Rightarrow((r1_xxreal_0\ X0\ k6_numbers)\vee(r1_matrix_6 \\
& X0\ X1\ (k2_matrix_6\ X0\ X1\ X2\ X3)\ X3))))
\end{aligned}$$