

t36_matrix_6

(TMG16tErCPMSGc8mYaLAsZmdECJH6pSCNeZ)

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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 $v1_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
 & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
 & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
 & (v7_ordinal1 X1) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 X0) \\
 & X1 X1) \Rightarrow (\forall X3.(m1_matrix_1 X3 (u1_struct_0 X0) X1 X1) \Rightarrow (\forall X4. \\
 & (m1_matrix_1 X4 (u1_struct_0 X0) X1 X1) \Rightarrow (\forall X5.(m1_matrix_1 \\
 & X5 (u1_struct_0 X0) X1 X1) \Rightarrow (((r2_matrix_6 X1 X0 X4 X2) \wedge (r2_matrix_6 \\
 & X1 X0 X5 X3)) \Rightarrow (r2_matrix_6 X1 X0 (k4_matrix_6 X1 X0 X4 X5) (k4_matrix_6 \\
 & X1 X0 X3 X2))))))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. \forall X3. ((v7_ordinal1 X0) \wedge \\
 & (((\neg v2_struct_0 X1) \wedge ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\
 & ((v33_algstr_0 X1) \wedge ((v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 \\
 & X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge \\
 & ((v5_vectsp_1 X1) \wedge (l6_algstr_0 X1)))))))))) \wedge ((m1_matrix_1 \\
 & X2 (u1_struct_0 X1) X0 X0) \wedge (m1_matrix_1 X3 (u1_struct_0 X1) X0 X0))) \Rightarrow \\
 & ((r2_matrix_6 X0 X1 X2 X3) \Rightarrow (r2_matrix_6 X0 X1 X3 X2))
 \end{aligned}
 \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7_ordinal1\ X0)\wedge((\neg v2_struct_0 \\ & X1)\wedge((\neg v6_struct_0\ X1)\wedge((v13_algstr_0\ X1)\wedge((v33_algstr_0\ X1)\wedge \\ & ((v3_group_1\ X1)\wedge((v5_group_1\ X1)\wedge((v2_rlvect_1\ X1)\wedge((v3_rlvect_1 \\ & X1)\wedge((v4_rlvect_1\ X1)\wedge((v4_vectsp_1\ X1)\wedge((v5_vectsp_1\ X1)\wedge \\ & (l6_algstr_0\ X1))))))))))\wedge(m1_matrix_1\ X2\ (u1_struct_0\ X1) \\ & X0\ X0))\Rightarrow(m1_matrix_1\ (k5_matrix_6\ X0\ X1\ X2)\ (u1_struct_0\ X1)\ X0 \\ & X0) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v7_ordinal1\ X0)\wedge \\ & (((\neg v2_struct_0\ X1)\wedge((\neg v6_struct_0\ X1)\wedge((v13_algstr_0\ X1)\wedge \\ & (v33_algstr_0\ X1)\wedge((v3_group_1\ X1)\wedge((v5_group_1\ X1)\wedge((v2_rlvect_1 \\ & X1)\wedge((v3_rlvect_1\ X1)\wedge((v4_rlvect_1\ X1)\wedge((v4_vectsp_1\ X1)\wedge \\ & ((v5_vectsp_1\ X1)\wedge(l6_algstr_0\ X1))))))))))\wedge((m1_matrix_1 \\ & X2\ (u1_struct_0\ X1)\ X0\ X0)\wedge(m1_matrix_1\ X3\ (u1_struct_0\ X1)\ X0\ X0)))\Rightarrow \\ & (m1_matrix_1\ (k4_matrix_6\ X0\ X1\ X2\ X3)\ (u1_struct_0\ X1)\ X0\ X0) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2_struct_0\ X1)\wedge \\ & ((\neg v6_struct_0\ X1)\wedge((v13_algstr_0\ X1)\wedge((v33_algstr_0\ X1)\wedge(\\ & (v3_group_1\ X1)\wedge((v5_group_1\ X1)\wedge((v2_rlvect_1\ X1)\wedge((v3_rlvect_1 \\ & X1)\wedge((v4_rlvect_1\ X1)\wedge((v4_vectsp_1\ X1)\wedge((v5_vectsp_1\ X1)\wedge \\ & (l6_algstr_0\ X1))))))))))\Rightarrow(\forall X2.(m1_matrix_1\ X2\ (u1_struct_0 \\ & X1)\ X0\ X0)\Rightarrow((v1_matrix_6\ X2\ X0\ X1)\Rightarrow(\forall X3.(m1_matrix_1\ X3 \\ & (u1_struct_0\ X1)\ X0\ X0)\Rightarrow((X3 = k5_matrix_6\ X0\ X1\ X2)\Leftrightarrow(r2_matrix_6 \\ & X0\ X1\ X3\ X2)))))) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2_struct_0\ X1)\wedge \\ & ((\neg v6_struct_0\ X1)\wedge((v13_algstr_0\ X1)\wedge((v33_algstr_0\ X1)\wedge(\\ & (v3_group_1\ X1)\wedge((v5_group_1\ X1)\wedge((v2_rlvect_1\ X1)\wedge((v3_rlvect_1 \\ & X1)\wedge((v4_rlvect_1\ X1)\wedge((v4_vectsp_1\ X1)\wedge((v5_vectsp_1\ X1)\wedge \\ & (l6_algstr_0\ X1))))))))))\Rightarrow(\forall X2.(m1_matrix_1\ X2\ (u1_struct_0 \\ & X1)\ X0\ X0)\Rightarrow((v1_matrix_6\ X2\ X0\ X1)\Leftrightarrow(\exists X3.(m1_matrix_1\ X3 \\ & (u1_struct_0\ X1)\ X0\ X0)\wedge(r2_matrix_6\ X0\ X1\ X2\ X3)))))) \end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1. ((\neg v2_struct_0\ X1) \wedge \\ & ((\neg v6_struct_0\ X1) \wedge (v13_algstr_0\ X1) \wedge (v33_algstr_0\ X1) \wedge \\ & (v3_group_1\ X1) \wedge (v5_group_1\ X1) \wedge (v2_rlvect_1\ X1) \wedge (v3_rlvect_1 \\ & X1) \wedge (v4_rlvect_1\ X1) \wedge (v4_vectsp_1\ X1) \wedge (v5_vectsp_1\ X1) \wedge \\ & (l6_algstr_0\ X1)))))) \Rightarrow (\forall X2.(m1_matrix_1\ X2\ (u1_struct_0 \\ & X1)\ X0\ X0) \Rightarrow (\forall X3.(m1_matrix_1\ X3\ (u1_struct_0\ X1)\ X0\ X0) \Rightarrow \\ & (((v1_matrix_6\ X2\ X0\ X1) \wedge (v1_matrix_6\ X3\ X0\ X1)) \Rightarrow ((v1_matrix_6 \\ & (k4_matrix_6\ X0\ X1\ X2\ X3)\ X0\ X1) \wedge (k5_matrix_6\ X0\ X1\ (k4_matrix_6 \\ & X0\ X1\ X2\ X3) = k4_matrix_6\ X0\ X1\ (k5_matrix_6\ X0\ X1\ X3)\ (k5_matrix_6 \\ & X0\ X1\ X2)))))) \end{aligned}$$