

t8_matrix_6

(TMXm5K5t9XLgMdAGBCUX2Nb3hNXQkjbnard)

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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 $k5_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k4_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge \\ (v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\ X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge \\ (l6_algstr_0 X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\ X1) X0 X0) \Rightarrow (k4_matrix_3 X1 (k12_matrix_1 X1 X0) X2 = X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \wedge \\ (v7_ordinal1 X1)) \Rightarrow (m1_matrix_1 (k12_matrix_1 X0 X1) (u1_struct_0 \\ X0) X1 X1) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge \\ (v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\ X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge \\ (l6_algstr_0 X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\ X1) X0 X0) \Rightarrow ((v1_matrix_6 X2 X0 X1) \Rightarrow (\forall X3.(m1_matrix_1 X3 \\ (u1_struct_0 X1) X0 X0) \Rightarrow ((X3 = k5_matrix_6 X0 X1 X2) \Leftrightarrow (r2_matrix_6 \\ X0 X1 X3 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\
& ((\neg v6_struct_0\ X1) \wedge ((v13_algstr_0\ X1) \wedge ((v33_algstr_0\ X1) \wedge \\
& (v3_group_1\ X1) \wedge ((v5_group_1\ X1) \wedge ((v2_rlvect_1\ X1) \wedge ((v3_rlvect_1 \\
& X1) \wedge ((v4_rlvect_1\ X1) \wedge ((v4_vectsp_1\ X1) \wedge ((v5_vectsp_1\ X1) \wedge \\
& (l6_algstr_0\ X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1\ X2\ (u1_struct_0 \\
& X1)\ X0\ X0) \Rightarrow ((v1_matrix_6\ X2\ X0\ X1) \Leftrightarrow (\exists X3.(m1_matrix_1\ X3 \\
& (u1_struct_0\ X1)\ X0\ X0) \wedge (r2_matrix_6\ X0\ X1\ X2\ X3))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\
& ((\neg v6_struct_0\ X1) \wedge ((v13_algstr_0\ X1) \wedge ((v33_algstr_0\ X1) \wedge \\
& (v3_group_1\ X1) \wedge ((v5_group_1\ X1) \wedge ((v2_rlvect_1\ X1) \wedge ((v3_rlvect_1 \\
& X1) \wedge ((v4_rlvect_1\ X1) \wedge ((v4_vectsp_1\ X1) \wedge ((v5_vectsp_1\ X1) \wedge \\
& (l6_algstr_0\ X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1\ X2\ (u1_struct_0 \\
& X1)\ X0\ X0) \Rightarrow (\forall X3.(m1_matrix_1\ X3\ (u1_struct_0\ X1)\ X0\ X0) \Rightarrow \\
& ((r2_matrix_6\ X0\ X1\ X2\ X3) \Leftrightarrow ((k4_matrix_3\ X1\ X2\ X3 = k4_matrix_3\ X1 \\
& X3\ X2) \wedge (k4_matrix_3\ X1\ X2\ X3 = k12_matrix_1\ X1\ X0))))))
\end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\
& ((\neg v6_struct_0\ X1) \wedge ((v13_algstr_0\ X1) \wedge ((v33_algstr_0\ X1) \wedge \\
& (v3_group_1\ X1) \wedge ((v5_group_1\ X1) \wedge ((v2_rlvect_1\ X1) \wedge ((v3_rlvect_1 \\
& X1) \wedge ((v4_rlvect_1\ X1) \wedge ((v4_vectsp_1\ X1) \wedge ((v5_vectsp_1\ X1) \wedge \\
& (l6_algstr_0\ X1)))))))))) \Rightarrow ((k5_matrix_6\ X0\ X1\ (k12_matrix_1 \\
& X1\ X0) = k12_matrix_1\ X1\ X0) \wedge (v1_matrix_6\ (k12_matrix_1\ X1\ X0)\ X0 \\
& X1))
\end{aligned}$$