

t45_matrix14

(TMatSHfhmyherLxumjpLZ81Tiy4F5o98ker)

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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 $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_matrix14 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_finseq_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k13_finseq_1 : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $k12_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow (\forall X4.(\\ & \neg v1_xboole_0 X4) \Rightarrow (\forall X5.(m1_matrix_1 X5 X4 X0 X1) \Rightarrow (((r1_xxreal_0 \\ & np_1 X2) \wedge ((r1_xxreal_0 X2 X0) \wedge ((r1_xxreal_0 np_1 X3) \wedge (r1_xxreal_0 \\ & X3 X1)))))) \Rightarrow (k4_tarski X2 X3 \in k2_matrix_1 X5)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow \\ & (\forall X2.(v7_ordinal1 X2) \Rightarrow (k2_finseq_7 X0 X1 X2 X2 = X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.k3_finseq_2 X0 = k13_finseq_1 X0 \quad (5)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k13_finseq_1 X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((v7_ordinal1 X1) \wedge (v7_ordinal1 X2))) \Rightarrow (\forall X3.(m1_matrix_1 X3 X0 X1 X2) \Rightarrow ((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 X0)))) \quad (8)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(l1_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \wedge ((m1_subset_1 X1 k5_numbers) \wedge (v7_ordinal1 X2))) \Rightarrow (m1_matrix_1 (k4_matrix14 X0 X1 X2) (u1_struct_0 X0) X1 X1) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \wedge (v7_ordinal1 X1)) \Rightarrow (m1_matrix_1 (k12_matrix_1 X0 X1) (u1_struct_0 X0) X1 X1) \quad (13)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
& ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 k5_numbers) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (k4_matrix14 \\
& X0 X1 X2 = k2_finseq_7 (k3_finseq_2 (u1_struct_0 X0) (k12_matrix_1 \\
& X0 X1) np_1 X2)))
\end{aligned} \tag{14}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\
& (v7_ordinal1 X1) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 X0) \\
& X1 X1) \Rightarrow ((X2 = k12_matrix_1 X0 X1) \Leftrightarrow ((\forall X3.(v7_ordinal1 X3) \Rightarrow \\
& ((k4_tarski X3 X3 \in k2_matrix_1 X2) \Rightarrow (k3_matrix_1 (u1_struct_0 \\
& X0) X2 X3 X3 = k5_struct_0 X0))) \wedge (\forall X3.(v7_ordinal1 X3) \Rightarrow (\\
& \forall X4.(v7_ordinal1 X4) \Rightarrow ((k4_tarski X3 X4 \in k2_matrix_1 X2) \Rightarrow \\
& ((X3 = X4) \vee (k3_matrix_1 (u1_struct_0 X0) X2 X3 X4 = k4_struct_0 X0))))))))))
\end{aligned} \tag{15}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \tag{16}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
& ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 k5_numbers) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\
& X0) X1 X1) \Rightarrow (\forall X3.(v7_ordinal1 X3) \Rightarrow (\forall X4.(v7_ordinal1 \\
& X4) \Rightarrow (((r1_xxreal_0 np_1 X3) \wedge ((r1_xxreal_0 X3 X1) \wedge ((r1_xxreal_0 \\
& np_1 X4) \wedge (r1_xxreal_0 X4 X1)))) \Rightarrow ((X3 = X4) \vee (k3_matrix_1 (u1_struct_0 \\
& X0) (k4_matrix14 X0 X1 np_1) X3 X4 = k4_struct_0 X0))))))
\end{aligned}$$