

t16_matrix14

(TMYmvME2NTXBWqikaEu7SFqj2ez9gWew5vd)

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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 $m1_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$m1_subset_1 \ k1_xboole_0 \ k4_ordinal1 \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 \ X0) \Rightarrow (\forall X1.((\neg v2_struct_0 \ X1) \wedge \\ & ((\neg v6_struct_0 \ X1) \wedge ((v13_algstr_0 \ X1) \wedge ((v33_algstr_0 \ X1) \wedge \\ & (v3_group_1 \ X1) \wedge ((v5_group_1 \ X1) \wedge ((v2_rlvect_1 \ X1) \wedge ((v3_rlvect_1 \\ & \ X1) \wedge ((v4_rlvect_1 \ X1) \wedge ((v4_vectsp_1 \ X1) \wedge ((v5_vectsp_1 \ X1) \wedge \\ & (l6_algstr_0 \ X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1 \ X2 \ (u1_struct_0 \\ & \ X1) \ X0 \ X0) \Rightarrow (k4_matrix_3 \ X1 \ X2 \ (k12_matrix_1 \ X1 \ X0) = X2)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 \ X0) \wedge ((\neg v6_struct_0 \ X0) \wedge ((v13_algstr_0 \\ & \ X0) \wedge ((v33_algstr_0 \ X0) \wedge ((v2_rlvect_1 \ X0) \wedge ((v3_rlvect_1 \ X0) \wedge \\ & ((v4_rlvect_1 \ X0) \wedge ((v3_group_1 \ X0) \wedge ((v5_group_1 \ X0) \wedge ((v4_vectsp_1 \\ & \ X0) \wedge ((v5_vectsp_1 \ X0) \wedge (l6_algstr_0 \ X0)))))))))) \Rightarrow (\forall X1. \\ & (m1_matrix_1 \ X1 \ (u1_struct_0 \ X0) \ k6_numbers \ k6_numbers) \Rightarrow ((X1 = \\ & k1_xboole_0) \wedge ((X1 = k12_matrix_1 \ X0 \ k6_numbers) \wedge (X1 = k11_matrix_1 \\ & \ X0 \ k6_numbers)))) \end{aligned} \tag{3}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (4)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge \\ ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge \\ (v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\ X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge \\ (l6_algstr_0 X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\ X1) X0 X0) \Rightarrow (\forall X3.(m1_matrix_1 X3 (u1_struct_0 X1) X0 X0) \Rightarrow \\ ((r2_matrix_6 X0 X1 X2 X3) \Leftrightarrow ((k4_matrix_3 X1 X2 X3 = k4_matrix_3 X1 \\ X3 X2) \wedge (k4_matrix_3 X1 X2 X3 = k12_matrix_1 X1 X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (7)$$

Theorem 1

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\ ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\ X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ (m1_matrix_1 X1 (u1_struct_0 X0) k6_numbers k6_numbers) \Rightarrow (v1_matrix_6 \\ X1 k6_numbers X0)) \end{aligned}$$