

t33_matrix_1

(TMR94MU8yrCZCrJd2DGgentZvwtZx7wweya)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ 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 $l6_algstr_0 : \iota \Rightarrow o$ 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 $k14_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ 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. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_struct_0 X0)) \Rightarrow ((k1_algstr_0 X0 X1 (k4_struct_0 X0) = X1) \wedge \\ (k1_algstr_0 X0 (k4_struct_0 X0) X1 = X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ (v7_ordinal1 X2) \Rightarrow (\forall X3.((\neg v2_struct_0 X3) \wedge (l6_algstr_0 \\ X3)) \Rightarrow ((k4_tarski X0 X1 \in k2_matrix_1 (k11_matrix_1 X3 X2)) \Rightarrow (k3_matrix_1 \\ (u1_struct_0 X3) (k11_matrix_1 X3 X2) X0 X1 = k4_struct_0 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ (\neg v1_xboole_0 X2) \Rightarrow (\forall X3.(m1_matrix_1 X3 X2 X0 X1) \Rightarrow (\forall X4. \\ (m1_matrix_1 X4 X2 X0 X1) \Rightarrow (k2_matrix_1 X3 = k2_matrix_1 X4)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((v7_ordinal1 X1) \wedge (v7_ordinal1 X2))) \Rightarrow (\forall X3. (m1_matrix_1 X3 X0 X1 X2) \Rightarrow ((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 X0)))) \quad (6)$$

Assume the following.

$$\forall X0. (l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0. (l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0. (l1_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (((v1_matrix_1 X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0))) \wedge ((v7_ordinal1 X2) \wedge (v7_ordinal1 X3))) \Rightarrow (m1_subset_1 (k3_matrix_1 X0 X1 X2 X3) X0) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \wedge (v7_ordinal1 X1)) \Rightarrow (m1_matrix_1 (k11_matrix_1 X0 X1) (u1_struct_0 X0) X1 X1) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\ (v7_ordinal1 X1) \Rightarrow (\forall X2. (m1_matrix_1 X2 (u1_struct_0 X0) \\ X1 X1) \Rightarrow (\forall X3. (m1_matrix_1 X3 (u1_struct_0 X0) X1 X1) \Rightarrow (\forall X4. \\ (m1_matrix_1 X4 (u1_struct_0 X0) X1 X1) \Rightarrow ((X4 = k14_matrix_1 X0 X1 \\ X2 X3) \Leftrightarrow (\forall X5. (v7_ordinal1 X5) \Rightarrow (\forall X6. (v7_ordinal1 \\ X6) \Rightarrow ((k4_tarski X5 X6 \in k2_matrix_1 X2) \Rightarrow (k3_matrix_1 (u1_struct_0 \\ X0) X4 X5 X6 = k1_algstr_0 X0 (k3_matrix_1 (u1_struct_0 X0) X2 X5 X6) \\ (k3_matrix_1 (u1_struct_0 X0) X3 X5 X6)))))))))) \quad (12) \end{aligned}$$

Theorem 1

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge (l6_algstr_0 X1)))))) \Rightarrow (\forall X2. (m1_matrix_1 X2 (u1_struct_0 X1) X0 X0) \Rightarrow (k14_matrix_1 X1 X0 X2 (k11_matrix_1 X1 X0) = X2)))$$