

t46_matrix_6

(TMFeL7Kuvnu8EzPvbouTCCkSkQyL18Z93md)

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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 $v4_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k4_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k4_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k5_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ 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. Assume the following.

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

(1)

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(\neg v1_xboole_0\ X1) \Rightarrow (\\ & \forall X2.(m1_matrix_1\ X2\ X1\ X0\ X0) \Rightarrow ((k3_finseq_1\ X2 = X0) \wedge ((k1_matrix_1 \\ & X2 = X0) \wedge (k2_matrix_1\ X2 = k2_zfmisc_1\ (k2_finseq_1\ X0)\ (k2_finseq_1 \\ & X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0) \wedge ((\neg v6_struct_0\ X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v33_algstr_0\ X0) \wedge ((v3_group_1\ X0) \wedge ((v5_group_1\ X0) \wedge (\\ & (v2_rlvect_1\ X0) \wedge ((v3_rlvect_1\ X0) \wedge ((v4_rlvect_1\ X0) \wedge ((v4_vectsp_1 \\ & X0) \wedge ((v5_vectsp_1\ X0) \wedge (l6_algstr_0\ X0)))))))))) \Rightarrow (\forall X1. \\ & ((v1_matrix_1\ X1) \wedge (m2_finseq_1\ X1\ (k3_finseq_2\ (u1_struct_0 \\ & X0)))) \Rightarrow (\forall X2.((v1_matrix_1\ X2) \wedge (m2_finseq_1\ X2\ (k3_finseq_2 \\ & (u1_struct_0\ X0)))) \Rightarrow ((k1_matrix_1\ X1 = k3_finseq_1\ X2) \Rightarrow ((k1_matrix_1 \\ & X2 = k6_numbers) \vee (k4_matrix_1\ (u1_struct_0\ X0)\ (k4_matrix_3\ X0 \\ & X1\ X2) = k4_matrix_3\ X0\ (k4_matrix_1\ (u1_struct_0\ X0)\ X2)\ (k4_matrix_1 \\ & (u1_struct_0\ X0)\ X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0\ X0) \wedge (v1_xxreal_0\ X1)) \Rightarrow (r1_xxreal_0\ X0\ X0) \quad (4)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7_ordinal1\ X0) \wedge ((\neg v1_xboole_0 \\ & X1) \wedge (m1_matrix_1\ X2\ X1\ X0\ X0)) \Rightarrow (k5_matrix_1\ X0\ X1\ X2 = k4_matrix_1 \\ & X1\ X2)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v7_ordinal1\ X0) \wedge \\ & (((\neg v2_struct_0\ X1) \wedge ((\neg v6_struct_0\ X1) \wedge ((v13_algstr_0\ X1) \wedge \\ & ((v33_algstr_0\ X1) \wedge ((v3_group_1\ X1) \wedge ((v5_group_1\ X1) \wedge ((v2_rlvect_1 \\ & X1) \wedge ((v3_rlvect_1\ X1) \wedge ((v4_rlvect_1\ X1) \wedge ((v4_vectsp_1\ X1) \wedge \\ & ((v5_vectsp_1\ X1) \wedge (l6_algstr_0\ X1)))))))))) \wedge ((m1_matrix_1 \\ & X2\ (u1_struct_0\ X1)\ X0\ X0) \wedge (m1_matrix_1\ X3\ (u1_struct_0\ X1)\ X0\ X0))) \Rightarrow \\ & (k4_matrix_6\ X0\ X1\ X2\ X3 = k4_matrix_3\ X1\ X2\ X3)) \end{aligned} \quad (7)$$

Assume the following.

$$\exists X0.(v1_xboole_0\ X0) \wedge ((v1_xcmplx_0\ X0) \wedge ((v1_xxreal_0\ X0) \wedge (v1_xreal_0\ X0))) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((v7_ordinal1 X1) \wedge (v7_ordinal1 X2))) \Rightarrow (\forall X3. (m1_matrix_1 X3 X0 X1 X2) \Rightarrow ((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 X0)))) \quad (10)$$

Assume the following.

$$\forall X0. (l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (11)$$

Assume the following.

$$\forall X0. (l2_struct_0 X0) \Rightarrow (l1_struct_0 X0) \quad (12)$$

Assume the following.

$$\forall X0. (l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v7_ordinal1 X0) \wedge (((\neg v2_struct_0 X1) \wedge ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge ((v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge (l6_algstr_0 X1)))))))))))))) \wedge (m1_matrix_1 X2 (u1_struct_0 X1) X0 X0)) \Rightarrow (m1_matrix_1 (k5_matrix_6 X0 X1 X2) (u1_struct_0 X1) X0 X0) \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v7_ordinal1 X0) \wedge (((\neg v2_struct_0 X1) \wedge ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge ((v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge (l6_algstr_0 X1)))))))))))))) \wedge ((m1_matrix_1 X2 (u1_struct_0 X1) X0 X0) \wedge (m1_matrix_1 X3 (u1_struct_0 X1) X0 X0))) \Rightarrow (m1_matrix_1 (k4_matrix_6 X0 X1 X2 X3) (u1_struct_0 X1) X0 X0) \quad (15)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge ((v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge (l6_algstr_0 X1)))))))))))))) \Rightarrow (\forall X2. (m1_matrix_1 X2 (u1_struct_0 X1) X0 X0) \Rightarrow ((v4_matrix_6 X2 X0 X1) \Leftrightarrow ((v1_matrix_6 X2 X0 X1) \wedge (k5_matrix_1 X0 (u1_struct_0 X1) X2 = k5_matrix_6 X0 X1 X2)))) \quad (16)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xreal_0 X0) \quad (18)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((\neg v6_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v33_algstr_0 X1) \wedge \\ & (v3_group_1 X1) \wedge (v5_group_1 X1) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 \\ & X1) \wedge (v4_rlvect_1 X1) \wedge (v4_vectsp_1 X1) \wedge (v5_vectsp_1 X1) \wedge \\ & (l6_algstr_0 X1)))))) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\ & X1) X0 X0) \Rightarrow (\forall X3.(m1_matrix_1 X3 (u1_struct_0 X1) X0 X0) \Rightarrow \\ & (((v4_matrix_6 X2 X0 X1) \wedge (v4_matrix_6 X3 X0 X1)) \Rightarrow ((r1_xxreal_0 \\ & X0 k6_numbers) \vee (v4_matrix_6 (k4_matrix_6 X0 X1 X2 X3) X0 X1)))))) \end{aligned}$$