

t73_matrix13 (TMVN- muA5HMeYnvFuEEYMAAtAn2z5WDjQ9Tgo)

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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 $v3_group_1 : \iota \Rightarrow o$ 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 $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_setfam_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_zfmisc_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_setfam_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_matrix_1 X1) \wedge \\
& \quad (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2. ((v1_finset_1 \\
& X2) \wedge ((v1_setfam_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 k5_numbers)))) \Rightarrow \\
& \quad (\forall X3. ((v1_finset_1 X3) \wedge ((v1_setfam_1 X3) \wedge (m1_subset_1 \\
& X3 (k1_zfmisc_1 k5_numbers)))) \Rightarrow ((k5_card_1 X2 = k5_card_1 X3) \Rightarrow \\
& \quad ((r1_tarski (k2_zfmisc_1 X2 X3) (k2_matrix_1 X1)) \Leftrightarrow ((r1_tarski \\
& X2 (k2_finseq_1 (k3_finseq_1 X1))) \wedge (r1_tarski X3 (k2_finseq_1 \\
& \quad (k1_matrix_1 X1)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (k5_card_1 (k2_finseq_1 X0) = X0) \tag{2}$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(v1_finset_1 X1) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (r1_xxreal_0 (k5_card_1 X0) (k5_card_1 X1)))) \quad (3)$$

Assume the following.

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

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (k2_finseq_1 X0 = k1_finseq_1 X0) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v7_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_zfmisc_1 (u1_struct_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_finset_1 (k1_finseq_1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (11)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (l1_struct_0 X0) \quad (14)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (15)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (m1_subset_1 (k5_card_1 X0) k4_ordinal1) \quad (16)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 X0) \wedge (v1_matrix_1 X0)))) \Rightarrow (m1_subset_1 (k1_matrix_1 X0) k5_numbers) \quad (17)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (18)$$

Assume the following.

$$\forall X0.(\neg v1_zfmisc_1 X0) \Rightarrow (\neg v2_setfam_1 X0) \quad (19)$$

Assume the following.

$$\forall X0.(l4_struct_0 X0) \Rightarrow ((\neg v6_struct_0 X0) \Rightarrow (\neg v7_struct_0 X0)) \quad (20)$$

Assume the following.

$$\forall X0.(\neg v2_setfam_1 X0) \Rightarrow (\neg v1_xboole_0 X0) \quad (21)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0))) \quad (22)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ & ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (v1_struct_0 X0)))) \Rightarrow (\forall X2.((v1_finset_1 X2) \wedge ((v1_setfam_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 k5_numbers)))) \Rightarrow (\forall X3.((v1_finset_1 X3) \wedge ((v1_setfam_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 k5_numbers)))) \Rightarrow (((r1_tarski (k2_zfmisc_1 X2 X3) (k2_matrix_1 X1)) \wedge (k5_card_1 X2 = k5_card_1 X3)) \Rightarrow ((r1_xxreal_0 (k5_card_1 X2) (k3_finseq_1 X1)) \wedge (r1_xxreal_0 (k5_card_1 X3) (k1_matrix_1 X1)))))) \end{aligned}$$