

t10_matrix_3 (TMFJLDprycmuQYNSYecEaNf-GRNhxum242oD)

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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 $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k12_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k7_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ 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 $m1_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ 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 $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4_tarski X0 X1 \in k2_zfmisc_1 X2 X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge (((v1_matrix_1 X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0))) \wedge (v7_ordinal1 X2))) \Rightarrow (k9_matrix_1 X0 X1 X2 = k7_matrix_1 X0 X1 X2) \quad (3)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge (v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))) \quad (5)$$

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.

$$\forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (v1_funct_1 X1) \wedge (v1_finseq_1 X1)) \quad (7)$$

Assume the following.

$$\forall X0. (l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0. (l2_struct_0 X0) \Rightarrow (l1_struct_0 X0) \quad (9)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((v1_matrix_1 X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0)) \wedge (v7_ordinal1 X2))) \Rightarrow (m2_finseq_1 (k7_matrix_1 X0 X1 X2) X0) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \wedge (v7_ordinal1 X1)) \Rightarrow (m1_matrix_1 (k12_matrix_1 X0 X1) (u1_struct_0 X0) X1 X1) \quad (12)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 X0)) \Rightarrow (\forall X2. (v7_ordinal1 X2) \Rightarrow (\forall X3. (m2_finseq_1 X3 X0) \Rightarrow ((X3 = k7_matrix_1 X0 X1 X2) \Leftrightarrow ((k3_finseq_1 X3 = k3_finseq_1 X1) \wedge (\forall X4. (v7_ordinal1 X4) \Rightarrow ((X4 \in k4_finseq_1 X1) \Rightarrow (k1_funct_1 X3 X4 = k3_matrix_1 X0 X1 X4 X2)))))))))) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 X0) \wedge (v1_matrix_1 X0)))) \Rightarrow (k2_matrix_1 X0 = k2_zfmisc_1 (k4_finseq_1 X0) (k2_finseq_1 (k1_matrix_1 X0))) \quad (14)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge (\\ & (v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\ & X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge \\ & (l6_algstr_0 X1)))))))))) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (\\ & \forall X3.(v7_ordinal1 X3) \Rightarrow ((k4_tarski X2 X3 \in k2_matrix_1 (k12_matrix_1 \\ & X1 X0)) \Rightarrow ((X2 = X3) \vee (k1_funct_1 (k9_matrix_1 (u1_struct_0 X1) (\\ & k12_matrix_1 X1 X0) X3) X2 = k4_struct_0 X1)))))) \end{aligned}$$