

t8_matrix_3 (TMFNUVVKMP- STB4wWWGeiCBpiqroqcesTHs3)

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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 $k8_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k6_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ 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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ 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 $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ 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.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge (((v1_matrix_1 X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0))) \wedge (v7_ordinal1 X2))) \Rightarrow (k8_matrix_1 X0 X1 X2 = k6_matrix_1 X0 X1 X2) \quad (3)$$

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.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((v7_ordinal1 X1)\wedge(v7_ordinal1 X2)))\Rightarrow(\forall X3.(m1_matrix_1 X3 X0 X1 X2)\Rightarrow((v1_matrix_1 X3)\wedge(m2_finseq_1 X3 (k3_finseq_2 X0)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0.(l2_struct_0 X0)\Rightarrow(l1_struct_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0)\Rightarrow((l2_struct_0 X0)\wedge(l1_algstr_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((v1_matrix_1 X1)\wedge(m1_finseq_1 X1 (k3_finseq_2 X0)))\wedge(v7_ordinal1 X2)))\Rightarrow(m2_finseq_1 (k6_matrix_1 X0 X1 X2) X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l6_algstr_0 X0))\wedge(v7_ordinal1 X1))\Rightarrow(m1_matrix_1 (k12_matrix_1 X0 X1) (u1_struct_0 X0) X1 X1) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_matrix_1 X1)\wedge \\ (m2_finseq_1 X1 (k3_finseq_2 X0)))\Rightarrow(\forall X2.(v7_ordinal1 \\ X2)\Rightarrow(\forall X3.(m2_finseq_1 X3 X0)\Rightarrow((X3 = k6_matrix_1 X0 X1 X2)\Leftrightarrow \\ ((k3_finseq_1 X3 = k1_matrix_1 X1)\wedge(\forall X4.(v7_ordinal1 X4)\Rightarrow \\ ((X4 \in k2_finseq_1 (k1_matrix_1 X1))\Rightarrow(k1_funct_1 X3 X4 = k3_matrix_1 \\ X0 X1 X2 X4)))))))) \quad (12) \end{aligned}$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v1_finseq_1 X0)\wedge(v1_matrix_1 X0))))\Rightarrow(k2_matrix_1 X0 = k2_zfmisc_1 (k4_finseq_1 X0) (k2_finseq_1 (k1_matrix_1 X0))) \quad (13)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\
& (v7_ordinal1 X1) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 X0) \\
& X1 X1) \Rightarrow ((X2 = k12_matrix_1 X0 X1) \Leftrightarrow ((\forall X3.(v7_ordinal1 X3) \Rightarrow \\
& ((k4_tarski X3 X3 \in k2_matrix_1 X2) \Rightarrow (k3_matrix_1 (u1_struct_0 \\
& X0) X2 X3 X3 = k5_struct_0 X0))) \wedge (\forall X3.(v7_ordinal1 X3) \Rightarrow (\\
& \forall X4.(v7_ordinal1 X4) \Rightarrow ((k4_tarski X3 X4 \in k2_matrix_1 X2) \Rightarrow \\
& ((X3 = X4) \vee (k3_matrix_1 (u1_struct_0 X0) X2 X3 X4 = k4_struct_0 X0)))))))))) \\
& \hspace{15em} (14)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge (\\
& (v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\
& X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge \\
& (l6_algstr_0 X1)))))))))) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (\\
& \forall X3.(v7_ordinal1 X3) \Rightarrow ((k4_tarski X2 X3 \in k2_matrix_1 (k12_matrix_1 \\
& X1 X0)) \Rightarrow ((X3 = X2) \vee (k1_funct_1 (k8_matrix_1 (u1_struct_0 X1) (\\
& k12_matrix_1 X1 X0) X2) X3 = k4_struct_0 X1))))))
\end{aligned}$$