

t30_matrix14

(TMLK8Nha5mKy1PYC2CXwYwTdcGFr5KhBWYA)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ 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 $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ 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 $k5_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ 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 $k6_numbers : \iota$ 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 $k4_ordinal1 : \iota$ be given. Let $k12_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & ((\neg v2_struct_0 X2) \wedge (l6_algstr_0 X2)) \Rightarrow (\forall X3.(m1_matrix_1 \\ & X3 (u1_struct_0 X2) k1_xboole_0 X0) \Rightarrow (\forall X4.(m1_matrix_1 \\ & X4 (u1_struct_0 X2) k1_xboole_0 X1) \Rightarrow (X3 = X4)))))) \end{aligned} \quad (1)$$

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.

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

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge \\
& (v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\
& X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge \\
& (l6_algstr_0 X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\
& X1) X0 X0) \Rightarrow (k4_matrix_3 X1 X2 (k12_matrix_1 X1 X0) = X2))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge \\
& (v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\
& X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge \\
& (l6_algstr_0 X1)))))))))) \Rightarrow (k5_matrix_1 X0 (u1_struct_0 X1) \\
& (k12_matrix_1 X1 X0) = k12_matrix_1 X1 X0)
\end{aligned} \tag{6}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{7}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.((v7_ordinal1 X0) \wedge ((\neg v1_xboole_0 \\
& X1) \wedge (m1_matrix_1 X2 X1 X0 X0))) \Rightarrow (k5_matrix_1 X0 X1 X2 = k4_matrix_1 \\
& X1 X2)
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v7_ordinal1\ X0)\wedge \\ & (((\neg v2_struct_0\ X1)\wedge(\neg v6_struct_0\ X1)\wedge((v13_algstr_0\ X1)\wedge \\ & ((v33_algstr_0\ X1)\wedge((v3_group_1\ X1)\wedge((v5_group_1\ X1)\wedge((v2_rlvect_1 \\ & X1)\wedge((v3_rlvect_1\ X1)\wedge((v4_rlvect_1\ X1)\wedge((v4_vectsp_1\ X1)\wedge \\ & ((v5_vectsp_1\ X1)\wedge(l6_algstr_0\ X1))))))))))\wedge((m1_matrix_1 \\ & X2\ (u1_struct_0\ X1)\ X0\ X0)\wedge(m1_matrix_1\ X3\ (u1_struct_0\ X1)\ X0\ X0)))\Rightarrow \\ & (k4_matrix_6\ X0\ X1\ X2\ X3 = k4_matrix_3\ X1\ X2\ X3) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0)\wedge(l1_struct_0\ X0))\Rightarrow(\neg v1_xboole_0\ (u1_struct_0\ X0)) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0\ X0)\wedge((v7_ordinal1 \\ & X1)\wedge(v7_ordinal1\ X2)))\Rightarrow(\forall X3.(m1_matrix_1\ X3\ X0\ X1\ X2)\Rightarrow \\ & ((v1_matrix_1\ X3)\wedge(m2_finseq_1\ X3\ (k3_finseq_2\ X0)))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(l6_algstr_0\ X0)\Rightarrow((l2_algstr_0\ X0)\wedge(l5_algstr_0\ X0)) \quad (13)$$

Assume the following.

$$\forall X0.(l2_algstr_0\ X0)\Rightarrow((l2_struct_0\ X0)\wedge(l1_algstr_0\ X0)) \quad (14)$$

Assume the following.

$$\forall X0.(l1_algstr_0\ X0)\Rightarrow(l1_struct_0\ X0) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v7_ordinal1\ X0)\wedge((\neg v1_xboole_0 \\ & X1)\wedge(m1_matrix_1\ X2\ X1\ X0\ X0)))\Rightarrow(m1_matrix_1\ (k5_matrix_1\ X0\ X1 \\ & X2)\ X1\ X0\ X0) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v7_ordinal1\ X0)\wedge \\ & (((\neg v2_struct_0\ X1)\wedge(\neg v6_struct_0\ X1)\wedge((v13_algstr_0\ X1)\wedge \\ & ((v33_algstr_0\ X1)\wedge((v3_group_1\ X1)\wedge((v5_group_1\ X1)\wedge((v2_rlvect_1 \\ & X1)\wedge((v3_rlvect_1\ X1)\wedge((v4_rlvect_1\ X1)\wedge((v4_vectsp_1\ X1)\wedge \\ & ((v5_vectsp_1\ X1)\wedge(l6_algstr_0\ X1))))))))))\wedge((m1_matrix_1 \\ & X2\ (u1_struct_0\ X1)\ X0\ X0)\wedge(m1_matrix_1\ X3\ (u1_struct_0\ X1)\ X0\ X0)))\Rightarrow \\ & (m1_matrix_1\ (k4_matrix_6\ X0\ X1\ X2\ X3)\ (u1_struct_0\ X1)\ X0\ X0) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l6_algstr_0 X0))\wedge (v7_ordinal1 X1))\Rightarrow(m1_matrix_1 (k12_matrix_1 X0 X1) (u1_struct_0 X0) X1 X1) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.((\neg v2_struct_0 \\ & X1)\wedge((\neg v6_struct_0 X1)\wedge(v13_algstr_0 X1)\wedge(v33_algstr_0 X1)\wedge \\ & ((v2_rlvect_1 X1)\wedge(v3_rlvect_1 X1)\wedge(v4_rlvect_1 X1)\wedge(v3_group_1 \\ & X1)\wedge(v5_group_1 X1)\wedge(v4_vectsp_1 X1)\wedge(v5_vectsp_1 X1)\wedge \\ & l6_algstr_0 X1))))))\Rightarrow(\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\ & X1) X0 X0)\Rightarrow(\forall X3.(m1_matrix_1 X3 (u1_struct_0 X1) X0 X0)\Rightarrow \\ & (k5_matrix_1 X0 (u1_struct_0 X1) (k4_matrix_6 X0 X1 X2 X3) = k4_matrix_6 \\ & X0 X1 (k5_matrix_1 X0 (u1_struct_0 X1) X3) (k5_matrix_1 X0 (u1_struct_0 \\ & X1) X2)))))) \end{aligned}$$