

t17_matrix_8

(TMN1WqSxP2usG1yTFHnk9PyZVz87eDRe7cq)

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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 $v2_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $l1_struct_0 : \iota \Rightarrow o$ 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.

$$k6_numbers = k1_xboole_0 \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. ((v7_ordinal1 X0) \wedge ((\neg v1_xboole_0 \\
& X1) \wedge (m1_matrix_1 X2 X1 X0 X0))) \Rightarrow (k5_matrix_1 X0 X1 X2 = k4_matrix_1 \\
& X1 X2)
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((v7_ordinal1 X0) \wedge \\
& (((\neg v2_struct_0 X1) \wedge ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\
& ((v33_algstr_0 X1) \wedge ((v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge \\
& ((v5_vectsp_1 X1) \wedge (l6_algstr_0 X1)))))))))) \wedge ((m1_matrix_1 \\
& X2 (u1_struct_0 X1) X0 X0) \wedge (m1_matrix_1 X3 (u1_struct_0 X1) X0 X0))) \Rightarrow \\
& (k4_matrix_6 X0 X1 X2 X3 = k4_matrix_3 X1 X2 X3)
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 \\
& (u1_struct_0 X0))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((v7_ordinal1 \\
& X1) \wedge (v7_ordinal1 X2))) \Rightarrow (\forall X3. (m1_matrix_1 X3 X0 X1 X2) \Rightarrow \\
& ((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 X0))))
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0. (l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \tag{9}$$

Assume the following.

$$\forall X0. (l2_struct_0 X0) \Rightarrow (l1_struct_0 X0) \tag{10}$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v7_ordinal1 X0) \wedge \\ & (((\neg v2_struct_0 X1) \wedge ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\ & ((v33_algstr_0 X1) \wedge ((v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 \\ & X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge \\ & ((v5_vectsp_1 X1) \wedge (l6_algstr_0 X1)))))))))) \wedge ((m1_matrix_1 \\ & X2 (u1_struct_0 X1) X0 X0) \wedge (m1_matrix_1 X3 (u1_struct_0 X1) X0 X0))) \Rightarrow \\ & (m1_matrix_1 (k4_matrix_6 X0 X1 X2 X3) (u1_struct_0 X1) X0 X0) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge \\ & (v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\ & X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge \\ & (l6_algstr_0 X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\ & X1) X0 X0) \Rightarrow ((v2_matrix_6 X2 X0 X1) \Leftrightarrow (k5_matrix_1 X0 (u1_struct_0 \\ & X1) X2 = X2))) \end{aligned} \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge \\ & (v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\ & X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge \\ & (l6_algstr_0 X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\ & X1) X0 X0) \Rightarrow ((v2_matrix_6 X2 X0 X1) \Rightarrow (v2_matrix_6 (k4_matrix_6 X0 \\ & X1 X2 (k5_matrix_1 X0 (u1_struct_0 X1) X2)) X0 X1))) \end{aligned}$$