

t23_matrix_8

(TMWguWSqtDMZfzvTj6hryokfp2JXNzhLhxt)

October 27, 2020

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 $v2_matrix_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k4_matrix_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $l1_struct_0 : \iota \Rightarrow o$ 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. Let $k11_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
 & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
 & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
 & ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\
 & X0)))) \Rightarrow (\forall X2. ((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 \\
 & (u1_struct_0 X0)))) \Rightarrow (\forall X3. ((v1_matrix_1 X3) \wedge (m2_finseq_1 \\
 & X3 (k3_finseq_2 (u1_struct_0 X0)))) \Rightarrow (((k1_matrix_1 X1 = k3_finseq_1 \\
 & X2) \wedge (k1_matrix_1 X2 = k3_finseq_1 X3)) \Rightarrow (k4_matrix_3 X0 (k4_matrix_3 \\
 & X0 X1 X2) X3 = k4_matrix_3 X0 X1 (k4_matrix_3 X0 X2 X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge \\ & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\ & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ & ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\ & X0)))) \Rightarrow ((\neg r1_xxreal_0 (k1_matrix_1 X1) k6_numbers) \Rightarrow (k4_matrix_3 \\ & X0 X1 (k1_matrix_3 X0 (k1_matrix_1 X1) (k1_matrix_1 X1)) = k1_matrix_3 \\ & X0 (k3_finseq_1 X1) (k1_matrix_1 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow (\\ & \forall X2.(m1_matrix_1 X2 X1 X0 X0) \Rightarrow ((k3_finseq_1 X2 = X0) \wedge ((k1_matrix_1 \\ & X2 = X0) \wedge (k2_matrix_1 X2 = k2_zfmisc_1 (k2_finseq_1 X0) (k2_finseq_1 \\ & X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge \\ & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\ & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ & ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 (u1_struct_0 \\ & X0)))) \Rightarrow (k4_matrix_3 X0 (k1_matrix_3 X0 (k3_finseq_1 X1) (k3_finseq_1 \\ & X1)) X1 = k1_matrix_3 X0 (k3_finseq_1 X1) (k1_matrix_1 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v7_ordinal1 X0) \wedge \\ & (((\neg v2_struct_0 X1) \wedge ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\ & ((v33_algstr_0 X1) \wedge ((v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 \\ & X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge \\ & ((v5_vectsp_1 X1) \wedge (l6_algstr_0 X1)))))))))) \wedge ((m1_matrix_1 \\ & X2 (u1_struct_0 X1) X0 X0) \wedge (m1_matrix_1 X3 (u1_struct_0 X1) X0 X0))) \Rightarrow \\ & (k4_matrix_6 X0 X1 X2 X3 = k4_matrix_3 X1 X2 X3) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((v7_ordinal1 \\ & X1) \wedge (v7_ordinal1 X2))) \Rightarrow (\forall X3.(m1_matrix_1 X3 X0 X1 X2) \Rightarrow \\ & ((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 X0)))) \end{aligned} \quad (7)$$

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.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v7_ordinal1 X0) \wedge \\ & (((\neg v2_struct_0 X1) \wedge ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\ & ((v33_algstr_0 X1) \wedge ((v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 \\ & X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge \\ & ((v5_vectsp_1 X1) \wedge (l6_algstr_0 X1)))))))))) \wedge ((m1_matrix_1 \\ & X2 (u1_struct_0 X1) X0 X0) \wedge (m1_matrix_1 X3 (u1_struct_0 X1) X0 X0))) \Rightarrow \\ & (m1_matrix_1 (k4_matrix_6 X0 X1 X2 X3) (u1_struct_0 X1) X0 X0) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge \\ & (v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\ & X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge \\ & (l6_algstr_0 X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\ & X1) X0 X0) \Rightarrow ((v2_matrix_8 X2 X0 X1) \Leftrightarrow (k4_matrix_6 X0 X1 X2 X2 = k11_matrix_1 \\ & X1 X0))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge \\ & (v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\ & X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge \\ & (l6_algstr_0 X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\ & X1) X0 X0) \Rightarrow (\forall X3.(m1_matrix_1 X3 (u1_struct_0 X1) X0 X0) \Rightarrow \\ & ((r1_matrix_6 X0 X1 X2 X3) \Leftrightarrow (k4_matrix_3 X1 X2 X3 = k4_matrix_3 X1 \\ & X3 X2)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
& (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& (v7_ordinal1 X1) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (k1_matrix_3 \\
& X0 X1 X2 = k5_finseq_2 (k4_finseq_2 X2 (u1_struct_0 X0)) X1 (k5_finseq_2 \\
& (u1_struct_0 X0) X2 (k4_struct_0 X0))))))
\end{aligned} \tag{14}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. \\
& (v7_ordinal1 X1) \Rightarrow (k11_matrix_1 X0 X1 = k5_finseq_2 (k4_finseq_2 \\
& X1 (u1_struct_0 X0)) X1 (k5_finseq_2 (u1_struct_0 X0) X1 (k4_struct_0 \\
& X0))))
\end{aligned} \tag{15}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((\neg v6_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v33_algstr_0 X1) \wedge (\\
& (v3_group_1 X1) \wedge ((v5_group_1 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\
& X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge \\
& (l6_algstr_0 X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\
& X1) X0 X0) \Rightarrow (\forall X3.(m1_matrix_1 X3 (u1_struct_0 X1) X0 X0) \Rightarrow \\
& (((v2_matrix_8 X2 X0 X1) \wedge (r1_matrix_6 X0 X1 X2 X3)) \Rightarrow ((r1_xxreal_0 \\
& X0 k6_numbers) \vee (v2_matrix_8 (k4_matrix_6 X0 X1 X2 X3) X0 X1))))))
\end{aligned}$$