

t53_matrix_9

(TMZ21L81Jjrrfg5xaMrpDz69bKe4dFJGiX9)

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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ 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 $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k12_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_setwiseo : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_matrix_2 : \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k15_matrix_2 : \iota \Rightarrow \iota$ be given. Let $k11_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
 & ((\neg v6_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v33_algstr_0 X1) \wedge \\
 & (v3_group_1 X1) \wedge (v5_group_1 X1) \wedge (v2_rlvect_1 X1) \wedge (v3_rlvect_1 \\
 & X1) \wedge (v4_rlvect_1 X1) \wedge (v4_vectsp_1 X1) \wedge (v5_vectsp_1 X1) \wedge \\
 & (l6_algstr_0 X1)))))) \Rightarrow (\forall X2.(m1_matrix_1 X2 (u1_struct_0 \\
 & X1) X0 X0) \Rightarrow ((\exists X3.(m1_subset_1 X3 k5_numbers) \wedge (X3 \in k2_finseq_1 \\
 & X0) \wedge (\forall X4.(m1_subset_1 X4 k5_numbers) \Rightarrow ((X4 \in k2_finseq_1 \\
 & X0) \Rightarrow (k1_funct_1 (k9_matrix_1 (u1_struct_0 X1) X2 X3) X4 = k4_struct_0 \\
 & X1)))))) \Rightarrow (k7_setwiseo (k12_matrix_2 X0) (u1_struct_0 X1) (u1_algstr_0 \\
 & X1) (k15_matrix_2 (k12_matrix_2 X0)) (k11_matrix_3 X0 X1 X2) = k4_struct_0 \\
 & X1))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\
& ((\neg v6_struct_0\ X1) \wedge ((v13_algstr_0\ X1) \wedge ((v33_algstr_0\ X1) \wedge \\
& (v3_group_1\ X1) \wedge ((v5_group_1\ X1) \wedge ((v2_rlvect_1\ X1) \wedge ((v3_rlvect_1 \\
& X1) \wedge ((v4_rlvect_1\ X1) \wedge ((v4_vectsp_1\ X1) \wedge ((v5_vectsp_1\ X1) \wedge \\
& (l6_algstr_0\ X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1\ X2\ (u1_struct_0 \\
& X1)\ X0\ X0) \Rightarrow (k12_matrix_3\ X0\ X1\ X2 = k7_setwiseo\ (k12_matrix_2\ X0) \\
& (u1_struct_0\ X1)\ (u1_algstr_0\ X1)\ (k15_matrix_2\ (k12_matrix_2 \\
& X0))\ (k11_matrix_3\ X0\ X1\ X2))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\
& ((\neg v6_struct_0\ X1) \wedge ((v13_algstr_0\ X1) \wedge ((v33_algstr_0\ X1) \wedge \\
& (v3_group_1\ X1) \wedge ((v5_group_1\ X1) \wedge ((v2_rlvect_1\ X1) \wedge ((v3_rlvect_1 \\
& X1) \wedge ((v4_rlvect_1\ X1) \wedge ((v4_vectsp_1\ X1) \wedge ((v5_vectsp_1\ X1) \wedge \\
& (l6_algstr_0\ X1)))))))))) \Rightarrow (\forall X2.(m1_matrix_1\ X2\ (u1_struct_0 \\
& X1)\ X0\ X0) \Rightarrow ((\exists X3.(m1_subset_1\ X3\ k5_numbers) \wedge ((X3 \in k2_finseq_1 \\
& X0) \wedge (\forall X4.(m1_subset_1\ X4\ k5_numbers) \Rightarrow ((X4 \in k2_finseq_1 \\
& X0) \Rightarrow (k1_funct_1\ (k9_matrix_1\ (u1_struct_0\ X1)\ X2\ X3)\ X4 = k4_struct_0 \\
& X1)))))) \Rightarrow (k12_matrix_3\ X0\ X1\ X2 = k4_struct_0\ X1))))
\end{aligned}$$