

t31_matrix13
(TMbLPe9xp7sZV8XK6hifVmpRee21xGFovtu)

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 $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k12_matrix_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrix13 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ 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 $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\forall X2. \\
& (v7_ordinal1\ X2) \Rightarrow (\forall X3. ((\neg v2_struct_0\ X3) \wedge ((\neg v6_struct_0 \\
& X3) \wedge ((v13_algstr_0\ X3) \wedge ((v33_algstr_0\ X3) \wedge ((v3_group_1\ X3) \wedge \\
& ((v5_group_1\ X3) \wedge ((v2_rlvect_1\ X3) \wedge ((v3_rlvect_1\ X3) \wedge ((v4_rlvect_1 \\
& X3) \wedge ((v4_vectsp_1\ X3) \wedge ((v5_vectsp_1\ X3) \wedge (l6_algstr_0\ X3)))))))))) \Rightarrow \\
& (\forall X4.(m2_finseq_2\ X4\ k5_numbers\ (k4_finseq_2\ X1\ k5_numbers)) \Rightarrow \\
& (\forall X5.(m2_finseq_2\ X5\ k5_numbers\ (k4_finseq_2\ X1\ k5_numbers)) \Rightarrow \\
& (\forall X6.((v1_matrix_1\ X6) \wedge (m2_finseq_1\ X6\ (k3_finseq_2\ (\\
& u1_struct_0\ X3)))) \Rightarrow (((X0 \in k2_finseq_1\ X1) \wedge ((X2 \in k2_finseq_1 \\
& X1) \wedge (k1_funct_1\ X4\ X0 = k1_funct_1\ X4\ X2))) \Rightarrow ((X0 = X2) \vee (k12_matrix_3 \\
& X1\ X3\ (k1_matrix13\ (u1_struct_0\ X3)\ X6\ X1\ X1\ X5\ X4) = k4_struct_0\ X3))))))))) \\
& \tag{2}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(\neg v1_xboole_0\ X1) \Rightarrow (\\
& \forall X2.((v3_card_1\ X2\ X0) \wedge (m2_finseq_1\ X2\ X1)) \Rightarrow (k4_finseq_1 \\
& X2 = k2_finseq_1\ X0))) \\
& \tag{3}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(m1_finseq_2\ X1\ X0) \Rightarrow (\forall X2.(m2_finseq_2 \\
& X2\ X0\ X1) \Leftrightarrow (m1_subset_1\ X2\ X1)) \\
& \tag{4}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(m2_finseq_1\ X1\ X0) \Leftrightarrow (m1_finseq_1\ X1\ X0) \\
& \tag{5}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& k5_numbers = k4_ordinal1 \\
& \tag{6}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finseq_1\ X0))) \Rightarrow \\
& (k4_finseq_1\ X0 = k9_xtuple_0\ X0) \\
& \tag{7}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& (\neg v1_xboole_0\ k4_ordinal1) \wedge (v3_ordinal1\ k4_ordinal1) \\
& \tag{8}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(m1_finseq_2\ X1\ X0) \Rightarrow (\forall X2.(m2_finseq_2 \\
& X2\ X0\ X1) \Rightarrow (m2_finseq_1\ X2\ X0)) \\
& \tag{9}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(m2_finseq_1\ X1\ X0) \Rightarrow ((v1_funct_1\ X1) \wedge (\\
& (v1_finseq_1\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers \\
& X0)))))) \\
& \tag{10}
\end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(v7_ordinal1 X0)\Rightarrow(m1_finseq_2 (k4_finseq_2 X0 X1) X1) \quad (12)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(m1_subset_1 (k2_finseq_1 X0) (k1_zfmisc_1 k5_numbers)) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow((v2_funct_1 X0)\Leftrightarrow(\forall X1.\forall X2.((X1 \in k9_xtuple_0 X0)\wedge((X2 \in k9_xtuple_0 X0)\wedge(k1_funct_1 X0 X1 = k1_funct_1 X0 X2))))\Rightarrow(X1 = X2)) \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(v7_ordinal1 X1))\Rightarrow(\forall X2.(m1_subset_1 X2 (k4_finseq_2 X1 X0))\Rightarrow(v3_card_1 X2 X1)) \quad (16)$$

Theorem 1

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((\neg v6_struct_0 X1)\wedge((v13_algstr_0 X1)\wedge((v33_algstr_0 X1)\wedge((v3_group_1 X1)\wedge((v5_group_1 X1)\wedge((v2_rlvect_1 X1)\wedge((v3_rlvect_1 X1)\wedge((v4_rlvect_1 X1)\wedge((v4_vectsp_1 X1)\wedge((v5_vectsp_1 X1)\wedge(l6_algstr_0 X1))))))))))\Rightarrow(\forall X2.(m2_finseq_2 X2 k5_numbers (k4_finseq_2 X0 k5_numbers))\Rightarrow(\forall X3.(m2_finseq_2 X3 k5_numbers (k4_finseq_2 X0 k5_numbers))\Rightarrow(\forall X4.((v1_matrix_1 X4)\wedge(m2_finseq_1 X4 (k3_finseq_2 (u1_struct_0 X1))))\Rightarrow((\neg v2_funct_1 X2)\Rightarrow(k12_matrix_3 X0 X1 (k1_matrix13 (u1_struct_0 X1) X4 X0 X0 X3 X2) = k4_struct_0 X1))))))$$