

t31_matrix_9

(TMWm64hzyEoh6MXgi3WTAuPSW7QSZThbPwL)

October 27, 2020

Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $np_2 : \iota$ be given. Let $np_1 : \iota$ be given. Let $v4_matrix_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((v1_relat_1\ X1) \wedge ((\\ v1_funct_1\ X1) \wedge ((v3_card_1\ X1\ X0) \wedge (v1_finseq_1\ X1)))) \Rightarrow (k4_finseq_1 \\ X1 = k2_finseq_1\ X0)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((v1_relat_1\ X3) \wedge \\ ((v1_funct_1\ X3) \wedge (v1_finseq_1\ X3))) \Rightarrow ((X3 = k11_finseq_1\ X0\ X1 \\ X2) \Leftrightarrow ((k3_finseq_1\ X3 = np_3) \wedge ((k1_funct_1\ X3\ np_1 = X0) \wedge ((k1_funct_1 \\ X3\ np_2 = X1) \wedge (k1_funct_1\ X3\ np_3 = X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$k2_finseq_1\ np_3 = k1_enumset1\ np_1\ np_2\ np_3 \tag{3}$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0\ np_3) \wedge (m2_subset_1\ np_3\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_3\ k5_numbers) \wedge (m1_subset_1\ np_3\ k1_numbers)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0))) \Rightarrow \\ & (k4_finseq_1 \ X0 = k9_xtuple_0 \ X0) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 \ X0) \wedge \\ & ((m1_subset_1 \ X1 \ X0) \wedge ((m1_subset_1 \ X2 \ X0) \wedge (m1_subset_1 \ X3 \ X0)))) \Rightarrow \\ & (k3_finseq_4 \ X0 \ X1 \ X2 \ X3 = k11_finseq_1 \ X1 \ X2 \ X3) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (v1_relat_1 \ (k11_finseq_1 \ X0 \\ & X1 \ X2)) \wedge (v1_funct_1 \ (k11_finseq_1 \ X0 \ X1 \ X2)) \end{aligned} \quad (10)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. v3_card_1 \ (k11_finseq_1 \ X0 \ X1 \\ & X2) \ np_3 \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. v1_finseq_1 \ (k11_finseq_1 \ X0 \\ & X1 \ X2) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (X3 = k1_enumset1 \\ & X0 \ X1 \ X2) \Leftrightarrow (\forall X4. (X4 \in X3) \Leftrightarrow (\neg (X4 \neq X0) \wedge ((X4 \neq X1) \wedge (X4 \neq X2)))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((v1_funct_1\ X1) \wedge ((\\
& \quad v1_funct_2\ X1\ (k2_finseq_1\ X0)\ (k2_finseq_1\ X0)) \wedge ((v3_funct_2 \\
& \quad X1\ (k2_finseq_1\ X0)\ (k2_finseq_1\ X0)) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1 \\
& \quad (k2_zfmisc_1\ (k2_finseq_1\ X0)\ (k2_finseq_1\ X0)))))) \Rightarrow ((v4_matrix_2 \\
& \quad X1\ X0) \Leftrightarrow (\exists X2.(v7_ordinal1\ X2) \wedge (\exists X3.(v7_ordinal1 \\
& \quad X3) \wedge ((X2 \in k9_xtuple_0\ X1) \wedge ((X3 \in k9_xtuple_0\ X1) \wedge ((X2 \neq X3) \wedge ((\\
& \quad k1_funct_1\ X1\ X2 = X3) \wedge ((k1_funct_1\ X1\ X3 = X2) \wedge (\forall X4.(v7_ordinal1 \\
& \quad X4) \Rightarrow ((X4 \in k9_xtuple_0\ X1) \Rightarrow ((X4 = X2) \vee ((X4 = X3) \vee (k1_funct_1\ X1 \\
& \quad X4 = X4))))))))))))) \\
& \hspace{15em} (15)
\end{aligned}$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1) \Rightarrow (v7_ordinal1\ X0) \quad (16)$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_funct_1\ X0) \wedge ((v1_funct_2\ X0\ (k2_finseq_1\ np_3) \\
& (k2_finseq_1\ np_3)) \wedge ((v3_funct_2\ X0\ (k2_finseq_1\ np_3)\ (k2_finseq_1 \\
& \quad np_3)) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_finseq_1 \\
& \quad np_3)\ (k2_finseq_1\ np_3)))))) \Rightarrow ((X0 = k3_finseq_4\ k5_numbers \\
& \quad np_2\ np_1\ np_3) \Rightarrow (v4_matrix_2\ X0\ np_3))
\end{aligned}$$