

t6_matrix_2

(TMaEPX5dKr9zthbD3WkEH1xovHKpRXVjFXN)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_matrix_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (k4_tarski\ np_1 \\ & np_1 \in k2_matrix_1\ (k3_matrix_2\ X0\ X1\ X2\ X3)) \wedge ((k4_tarski\ np_1 \\ & np_2 \in k2_matrix_1\ (k3_matrix_2\ X0\ X1\ X2\ X3)) \wedge ((k4_tarski\ np_2 \\ & np_1 \in k2_matrix_1\ (k3_matrix_2\ X0\ X1\ X2\ X3)) \wedge (k4_tarski\ np_2 \\ & np_2 \in k2_matrix_1\ (k3_matrix_2\ X0\ X1\ X2\ X3)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1\ X2) \wedge ((v1_funct_1 \\ & X2) \wedge (v1_finseq_1\ X2))) \Rightarrow ((X2 = k10_finseq_1\ X0\ X1) \Leftrightarrow ((k3_finseq_1 \\ & X2 = np_2) \wedge ((k1_funct_1\ X2\ np_1 = X0) \wedge (k1_funct_1\ X2\ np_2 = X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0\ np_2) \wedge (m2_subset_1\ np_2\ k1_numbers\ k5_numbers)) \wedge \\ & ((m1_subset_1\ np_2\ k5_numbers) \wedge (m1_subset_1\ np_2\ k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\ & ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (5)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1_xboole_0 \\ &X0)\wedge((m1_subset_1 X1 X0)\wedge((m1_subset_1 X2 X0)\wedge((m1_subset_1 \\ &X3 X0)\wedge(m1_subset_1 X4 X0))))\Rightarrow(k6_matrix_2 X0 X1 X2 X3 X4 = k3_matrix_2 \\ &X1 X2 X3 X4) \end{aligned} \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 (k10_finseq_1 X0 X1))\wedge(v1_funct_1 (k10_finseq_1 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.v1_finseq_1 (k10_finseq_1 X0 X1) \quad (9)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((v7_ordinal1 \\ &X1)\wedge(v7_ordinal1 X2)))\Rightarrow(\forall X3.(m1_matrix_1 X3 X0 X1 X2)\Rightarrow \\ &((v1_matrix_1 X3)\wedge(m2_finseq_1 X3 (k3_finseq_2 X0)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1_xboole_0 \\ &X0)\wedge((m1_subset_1 X1 X0)\wedge((m1_subset_1 X2 X0)\wedge((m1_subset_1 \\ &X3 X0)\wedge(m1_subset_1 X4 X0))))\Rightarrow(m1_matrix_1 (k6_matrix_2 X0 X1 \\ &X2 X3 X4) X0 np_2 np_2) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.\forall X3.(v1_relat_1 (k3_matrix_2 \\ &X0 X1 X2 X3))\wedge((v1_funct_1 (k3_matrix_2 X0 X1 X2 X3))\wedge((v1_finseq_1 \\ &(k3_matrix_2 X0 X1 X2 X3))\wedge(v1_matrix_1 (k3_matrix_2 X0 X1 X2 X3)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.\forall X3.(((v1_matrix_1 X1)\wedge \\ &(m1_finseq_1 X1 (k3_finseq_2 X0)))\wedge((v7_ordinal1 X2)\wedge(v7_ordinal1 \\ &X3)))\Rightarrow(m1_subset_1 (k3_matrix_1 X0 X1 X2 X3) X0) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 \\ & \quad X0))) \Rightarrow (\forall X2. (v7_ordinal1 X2) \Rightarrow (\forall X3. (v7_ordinal1 \\ & \quad X3) \Rightarrow ((k4_tarski X2 X3 \in k2_matrix_1 X1) \Rightarrow (\forall X4. (m1_subset_1 \\ & \quad X4 X0) \Rightarrow ((X4 = k3_matrix_1 X0 X1 X2 X3) \Leftrightarrow (\exists X5. (m2_finseq_1 \\ & \quad X5 X0) \wedge ((X5 = k1_funct_1 X1 X2) \wedge (X4 = k1_funct_1 X5 X3))))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. k3_matrix_2 X0 X1 \\ & \quad X2 X3 = k10_finseq_1 (k10_finseq_1 X0 X1) (k10_finseq_1 X2 X3) \end{aligned} \quad (15)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ & \quad (\forall X2. (m1_subset_1 X2 X0) \Rightarrow (\forall X3. (m1_subset_1 X3 X0) \Rightarrow \\ & \quad (\forall X4. (m1_subset_1 X4 X0) \Rightarrow ((k3_matrix_1 X0 (k6_matrix_2 \\ & \quad X0 X1 X2 X3 X4) np_1 np_1 = X1) \wedge ((k3_matrix_1 X0 (k6_matrix_2 X0 \\ & \quad X1 X2 X3 X4) np_1 np_2 = X2) \wedge ((k3_matrix_1 X0 (k6_matrix_2 X0 X1 \\ & \quad X2 X3 X4) np_2 np_1 = X3) \wedge (k3_matrix_1 X0 (k6_matrix_2 X0 X1 X2 X3 \\ & \quad X4) np_2 np_2 = X4)))))))) \end{aligned}$$