

t27_matrix_1 (TMdnVyCAfYk- CAz5BTiLy4jUXyJodx5NHZWx)

October 27, 2020

Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ 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 $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (\neg v1_xboole_0 X2) \Rightarrow (\forall X3.(m1_matrix_1 X3 X2 X0 X1) \Rightarrow ((k3_finseq_1 \\ & X3 = X0) \wedge (k2_matrix_1 X3 = k2_zfmisc_1 (k2_finseq_1 X0) (k2_finseq_1 \\ & (k1_matrix_1 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge \\ & (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2.((v1_matrix_1 \\ & X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 X0))) \Rightarrow (((k3_finseq_1 X1 = k3_finseq_1 \\ & X2) \wedge ((k1_matrix_1 X1 = k1_matrix_1 X2) \wedge (\forall X3.(v7_ordinal1 \\ & X3) \Rightarrow (\forall X4.(v7_ordinal1 X4) \Rightarrow ((k4_tarski X3 X4 \in k2_matrix_1 \\ & X1) \Rightarrow (k3_matrix_1 X0 X1 X3 X4 = k3_matrix_1 X0 X2 X3 X4)))))) \Rightarrow (X1 = \\ & X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge \\ & (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow ((\neg r1_xreal_0 (k3_finseq_1 \\ & X1) k1_xboole_0) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow ((m1_matrix_1 \\ & X1 X0 (k3_finseq_1 X1) X2) \Leftrightarrow (X2 = k1_matrix_1 X1)))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((v7_ordinal1 \\ X1)\wedge(v7_ordinal1 X2)))\Rightarrow(\forall X3.(m1_matrix_1 X3 X0 X1 X2)\Rightarrow \\ ((v1_matrix_1 X3)\wedge(m2_finseq_1 X3 (k3_finseq_2 X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(\\ (v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v1_finseq_1 \\ X0)\wedge(v1_matrix_1 X0))))\Rightarrow(m1_subset_1 (k1_matrix_1 X0) k5_numbers) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 \\ X1) (k1_tarski X0) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v1_finseq_1 \\ X0)\wedge(v1_matrix_1 X0))))\Rightarrow(\forall X1.(m1_subset_1 X1 k5_numbers)\Rightarrow \\ (((\neg r1_xxreal_0 (k3_finseq_1 X0) k1_xboole_0)\Rightarrow((X1 = k1_matrix_1 \\ X0)\Leftrightarrow(\exists X2.((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v1_finseq_1 \\ X2))))\wedge((X2 \in k10_xtuple_0 X0)\wedge(k3_finseq_1 X2 = X1))))))\wedge((r1_xxreal_0 \\ (k3_finseq_1 X0) k1_xboole_0)\Rightarrow((X1 = k1_matrix_1 X0)\Leftrightarrow(X1 = k1_xboole_0)))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(v7_ordinal1 X1)\Rightarrow(\forall X2. \\ (\neg v1_xboole_0 X2)\Rightarrow(\forall X3.(m1_matrix_1 X3 X2 X0 X1)\Rightarrow(\forall X4. \\ (m1_matrix_1 X4 X2 X0 X1)\Rightarrow((\forall X5.(v7_ordinal1 X5)\Rightarrow(\forall X6. \\ (v7_ordinal1 X6)\Rightarrow((k4_tarski X5 X6 \in k2_matrix_1 X3)\Rightarrow(k3_matrix_1 \\ X2 X3 X5 X6 = k3_matrix_1 X2 X4 X5 X6))))))\Rightarrow(X3 = X4)))))) \end{aligned}$$