

t22_matrix13
(TMRu9YLUUpkRungMBAJcChrEZtVFK8KbRu)

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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 $np_2 : \iota$ be given. Let $k6_matrix_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $v2_xreal_0 : \iota \Rightarrow o$ 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 $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k4_tarski X0 X1 \in k2_zfmisc_1 X2 X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 X0) \Rightarrow (\forall X3. (m1_subset_1 X3 X0) \Rightarrow \\ & (\forall X4. (m1_subset_1 X4 X0) \Rightarrow ((k3_matrix_1 X0 (k6_matrix_2 \\ & X0 X1 X2 X3 X4) np_1 np_1 = X1) \wedge ((k3_matrix_1 X0 (k6_matrix_2 X0 \\ & X1 X2 X3 X4) np_1 np_2 = X2) \wedge ((k3_matrix_1 X0 (k6_matrix_2 X0 X1 \\ & X2 X3 X4) np_2 np_1 = X3) \wedge (k3_matrix_1 X0 (k6_matrix_2 X0 X1 X2 X3 \\ & X4) np_2 np_2 = X4)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$(k2_finseq_1 np_1 = k1_tarski np_1) \wedge (k2_finseq_1 np_2 = k2_tarski np_1 np_2) \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\forall X2. \\
& (\neg v1_xboole_0\ X2) \Rightarrow (\forall X3.(m1_matrix_1\ X3\ X2\ X0\ X1) \Rightarrow (\forall X4. \\
& (m1_matrix_1\ X4\ X2\ X0\ X1) \Rightarrow ((\forall X5.(v7_ordinal1\ X5) \Rightarrow (\forall X6. \\
& (v7_ordinal1\ X6) \Rightarrow ((k4_tarski\ X5\ X6 \in k2_matrix_1\ X3) \Rightarrow (k3_matrix_1 \\
& X2\ X3\ X5\ X6 = k3_matrix_1\ X2\ X4\ X5\ X6)))))) \Rightarrow (X3 = X4))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(\neg v1_xboole_0\ X1) \Rightarrow (\\
& \forall X2.(m1_matrix_1\ X2\ X1\ X0\ X0) \Rightarrow ((k3_finseq_1\ X2 = X0) \wedge ((k1_matrix_1 \\
& X2 = X0) \wedge (k2_matrix_1\ X2 = k2_zfmisc_1\ (k2_finseq_1\ X0)\ (k2_finseq_1 \\
& X0))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0\ np_2) \wedge (m2_subset_1\ np_2\ k1_numbers\ k5_numbers)) \wedge \\
& ((m1_subset_1\ np_2\ k5_numbers) \wedge (m1_subset_1\ np_2\ k1_numbers))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\
& ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers))
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1\ X1\ X0) \Leftrightarrow (m1_finseq_1\ X1\ X0) \tag{8}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{9}$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((v1_matrix_1\ X1) \wedge \\
& (m1_finseq_1\ X1\ (k3_finseq_2\ X0))) \wedge ((v7_ordinal1\ X2) \wedge (v7_ordinal1 \\
& X3))) \Rightarrow (m1_subset_1\ (k3_matrix_1\ X0\ X1\ X2\ X3)\ X0)
\end{aligned} \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.k4_tarSKI X0 X1 = k2_tarSKI (k2_tarSKI X0 X1) (k1_tarSKI X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_tarSKI X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \quad (14)$$

Assume the following.

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

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_matrix_1 X1 X0 np_2 np_2) \Rightarrow (X1 = k6_matrix_2 X0 (k3_matrix_1 X0 X1 np_1 np_1) (k3_matrix_1 X0 X1 np_1 np_2) (k3_matrix_1 X0 X1 np_2 np_1) (k3_matrix_1 X0 X1 np_2 np_2))))$$