

t20_matrix13 (TM- LQq8mX91Ao7C6L86n8EEyx9ZZcmYPcqkB)

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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 $np_1 : \iota$ be given. Let $k2_matrlin : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_matrix_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k5_matrix_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0\ X0) \Rightarrow (\forall X1. (m1_subset_1\ X1\ X0) \Rightarrow \\ & ((k4_tarski\ np_1\ np_1 \in k2_matrix_1\ (k5_matrix_2\ X0\ np_1\ (k4_matrix_2\ X0\ X1))) \wedge (k3_matrix_1\ X0\ (k5_matrix_2\ X0\ np_1\ (k4_matrix_2\ X0\ X1))\ np_1\ np_1 = X1))) \end{aligned} \quad (2)$$

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.

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

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow \\ & (m1_matrix_1\ (k9_finseq_1\ (k12_finseq_1\ X0\ X1))\ X0\ np_1\ np_1)) \end{aligned} \quad (6)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_finseq_2\ X1\ X0) \Rightarrow (\forall X2.(m2_finseq_2 \\ & X2\ X0\ X1) \Leftrightarrow (m1_subset_1\ X2\ X1)) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1\ X1\ X0) \Leftrightarrow (m1_finseq_1\ X1\ X0) \quad (9)$$

Assume the following.

$$\forall X0.k9_finseq_1\ X0 = k5_finseq_1\ X0 \quad (10)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0\ X0) \wedge ((v7_ordinal1 \\ & X1) \wedge (m1_subset_1\ X2\ (k4_finseq_2\ X1\ X0)))) \Rightarrow (k5_matrix_2\ X0\ X1 \\ & X2 = k5_finseq_1\ X2) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k4_matrix_2 X0 X1 = k5_finseq_1 X1) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_finseq_1 X1 X0)) \Rightarrow (k2_matrlin X0 X1 = k5_finseq_1 X1) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k12_finseq_1 X0 X1 = k5_finseq_1 X1) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((v7_ordinal1 X1) \wedge (v7_ordinal1 X2))) \Rightarrow (\forall X3.(m1_matrix_1 X3 X0 X1 X2) \Rightarrow ((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 X0)))) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (m2_finseq_2 (k4_matrix_2 X0 X1) X0 (k4_finseq_2 np_1 X0)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(v7_ordinal1 X0) \Rightarrow (m1_finseq_2 (k4_finseq_2 X0 X1) X1) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1_matrix_1 X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0))) \wedge ((v7_ordinal1 X2) \wedge (v7_ordinal1 X3))) \Rightarrow (m1_subset_1 (k3_matrix_1 X0 X1 X2 X3) X0) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (m2_finseq_1 (k12_finseq_1 X0 X1) X0) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (22)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (23)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0\ X0) \Rightarrow (\forall X1.(m1_matrix_1\ X1\ X0\ np_1\ np_1) \Rightarrow (X1 = k2_matrlin\ X0\ (k4_matrix_2\ X0\ (k3_matrix_1\ X0\ X1\ np_1\ np_1))))$$