

t53_matrix13

(TMP2Acj4kaCoA6hs3uqEhZ7fwRVYArageyJ)

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Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_setfam_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k8_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_matrix13 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ 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 $k1_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg (X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. ((v1_finset_1 X0) \wedge ((v1_setfam_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k5_numbers)))) \Rightarrow (\exists X1. (v7_ordinal1 X1) \wedge (r1_tarski X0 (k2_finseq_1 X1))) \quad (3)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. (v1_finset_1 X1) \Rightarrow ((r1_tarski X1 (k2_finseq_1 X0)) \Rightarrow (k1_relset_1 k5_numbers (k14_finseq_1 X1) = k2_finseq_1 (k5_card_1 X1)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1)\Rightarrow((v1_xboole_0 X1)\vee (X0 \in X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarski X0 X1)\wedge(r1_tarski X1 X2))\Rightarrow(r1_tarski X0 X2) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1)\Rightarrow(r1_tarski (k8_relat_1 X1 X0) (k9_xtuple_0 X1)) \quad (8)$$

Assume the following.

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

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (10)$$

Assume the following.

$$\forall X0.((v1_finset_1 X0)\wedge((v1_setfam_1 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 k5_numbers))))\Rightarrow(k5_matrix13 X0 = k14_finseq_1 X0) \quad (11)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(k2_finseq_1 X0 = k1_finseq_1 X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_setfam_1 (k1_finseq_1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_finset_1 X0))\Rightarrow(v1_finset_1 (k9_xtuple_0 X0)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (17)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0)\Rightarrow(m1_subset_1 (k5_card_1 X0) k4_ordinal1) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(m1_subset_1 (k1_relset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (19)$$

Assume the following.

$$\forall X0.m2_finseq_1 (k14_finseq_1 X0) k5_numbers \quad (20)$$

Assume the following.

$$\forall X0.(v1_setfam_1 X0)\Leftrightarrow(\neg k6_numbers \in X0) \quad (21)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (23)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_finset_1 X1)) \quad (24)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finset_1 X0))) \quad (25)$$

Theorem 1

$$\forall X0.\forall X1.((v1_finset_1 X1)\wedge((v1_setfam_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 k5_numbers))))\Rightarrow((v1_finset_1 (k8_relat_1 (k5_matrix13 X1) X0))\wedge((v1_setfam_1 (k8_relat_1 (k5_matrix13 X1) X0))\wedge(m1_subset_1 (k8_relat_1 (k5_matrix13 X1) X0) (k1_zfmisc_1 k5_numbers))))))$$