

t21_matrix_2
(TMU1h3H8TbgfHrX7Y4eTEzgctvbTsunfXBg)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_matrix_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_matrix_2 : \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_finseq_2 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_matrix_2 : \iota \Rightarrow o$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (k3_relat_1 X0 (k4_relat_1 (k10_xtuple_0 X0)) = X0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (k3_relat_1 (k4_relat_1 (k9_xtuple_0 X0)) X0 = X0) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge (v3_matrix_2 X0)) \Rightarrow (\forall X1.(m1_matrix_2 X1 X0) \Leftrightarrow (m1_subset_1 X1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.k6_partfun1\ X0 = k4_relat_1\ X0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1\ X1)\wedge(v5_relat_1\ X1\ X0))\Rightarrow(k2_relset_1\ X0\ X1 = k10_xtuple_0\ X1) \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(k2_finseq_1\ X0 = k1_finseq_1\ X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1\ X1)\wedge(v4_relat_1\ X1\ X0))\Rightarrow(k1_relset_1\ X0\ X1 = k9_xtuple_0\ X1) \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((\neg v1_xboole_0\ (k12_matrix_2\ X0))\wedge(v3_matrix_2\ (k12_matrix_2\ X0))) \quad (10)$$

Assume the following.

$$\forall X0.((v7_ordinal1\ X0)\wedge(\neg v1_xboole_0\ X0))\Rightarrow(\neg v1_xboole_0\ (k1_finseq_1\ X0)) \quad (11)$$

Assume the following.

$$v1_xboole_0\ k1_xboole_0 \quad (12)$$

Assume the following.

$$\forall X0.(v1_relat_1\ (k4_relat_1\ X0))\wedge((v4_relat_1\ (k4_relat_1\ X0)\ X0)\wedge((v1_funct_1\ (k4_relat_1\ X0))\wedge(v1_partfun1\ (k4_relat_1\ X0)\ X0))) \quad (13)$$

Assume the following.

$$\forall X0.(v1_partfun1\ (k6_partfun1\ X0)\ X0)\wedge(m1_subset_1\ (k6_partfun1\ X0)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(X1 = k12_matrix_2\ X0)\Leftrightarrow \\ (\forall X2.(X2 \in X1)\Leftrightarrow((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ (k2_finseq_1 \\ X0)\ (k2_finseq_1\ X0))\wedge((v3_funct_2\ X2\ (k2_finseq_1\ X0)\ (k2_finseq_1 \\ X0))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_finseq_1 \\ X0)\ (k2_finseq_1\ X0)))))))))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow((v2_funct_2 X1 X0)\Leftrightarrow(k2_relset_1 X0 X1 = X0)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(((X1\neq k1_xboole_0)\Rightarrow((v1_funct_2 X2 X0 X1)\Leftrightarrow(X0 = k1_relset_1 X0 X2)))\wedge((X1 = k1_xboole_0)\Rightarrow((v1_funct_2 X2 X0 X1)\Leftrightarrow(X2 = k1_xboole_0)))) \quad (17)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(k1_finseq_2 X0 = k6_partfun1 (k2_finseq_1 X0)) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(((v1_funct_1 X2)\wedge(v3_funct_2 X2 X0 X1))\Rightarrow((v1_funct_1 X2)\wedge((v2_funct_1 X2)\wedge(v2_funct_2 X2 X1)))) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v1_partfun1 X2 X0)\Rightarrow(v1_funct_2 X2 X0 X1)) \quad (22)$$

Theorem 1

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(m1_matrix_2 X1 (k12_matrix_2 X0))\Rightarrow((k3_relat_1 (k1_finseq_2 X0) X1 = X1)\wedge(k3_relat_1 X1 (k1_finseq_2 X0) = X1)))$$