

t44_matrixc1
(TMTP9K1ug3LnqDaiwfgkZ2xg14ntRTcAPAp)

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Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k5_matrixc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v2_binop_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_finseqop : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v2_valued_0 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v4_valued_0 : \iota \Rightarrow o$ be given. Let $v5_valued_0 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $k29_binop_2 : \iota$ be given. Let $v1_binop_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow (m2_finseq_2 X1 X0 (k4_finseq_2 (k3_finseq_1 X1) X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (v7_ordinal1 X1) \Rightarrow (\\ & \quad \forall X2. ((v3_card_1 X2 X1) \wedge (m2_finseq_1 X2 X0)) \Rightarrow (\forall X3. \\ & \quad ((v3_card_1 X3 X1) \wedge (m2_finseq_1 X3 X0)) \Rightarrow (\forall X4. ((v3_card_1 \\ & \quad X4 X1) \wedge (m2_finseq_1 X4 X0)) \Rightarrow (\forall X5. ((v1_funct_1 X5) \wedge ((v1_funct_2 \\ & \quad X5 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & \quad (k2_zfmisc_1 X0 X0) X0)))))) \Rightarrow ((v2_binop_1 X5 X0) \Rightarrow (r2_relset_1 \\ & \quad k5_numbers X0 (k1_finseqop X0 X0 X0 X5 (k1_finseqop X0 X0 X0 X5 X2 X3) \\ & \quad X4) (k1_finseqop X0 X0 X0 X5 X2 (k1_finseqop X0 X0 X0 X5 X3 X4))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((r2_relset_1 X0 X1 X2 X3)\Leftrightarrow(X2 = X3)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\begin{aligned} \exists X0.(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ k5_numbers)))\wedge((\neg v1_xboole_0 X0)\wedge((v1_relat_1 X0)\wedge((v4_relat_1 \\ X0 k5_numbers)\wedge((v5_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge \\ ((v1_partfun1 X0 k5_numbers)\wedge((v1_funct_2 X0 k5_numbers k5_numbers)\wedge \\ ((v1_valued_0 X0)\wedge((v2_valued_0 X0)\wedge((v3_valued_0 X0)\wedge((v4_valued_0 \\ X0)\wedge(v5_valued_0 X0)))))))))) \quad (8) \end{aligned}$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (9)$$

Assume the following.

$$\neg v1_xboole_0 k2_numbers \quad (10)$$

Assume the following.

$$(v1_funct_1 k29_binop_2)\wedge((v1_funct_2 k29_binop_2 (k2_zfmisc_1 k2_numbers k2_numbers) k2_numbers)\wedge((v1_binop_1 k29_binop_2 k2_numbers)\wedge(v2_binop_1 k29_binop_2 k2_numbers))) \quad (11)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge(v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (14)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((m1_finseq_1 X0 k2_numbers)\wedge(m1_finseq_1 X1 k2_numbers))\Rightarrow(m2_finseq_1 (k5_matrixc1 X0 X1) k2_numbers) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.(v7_ordinal1 X0)\Rightarrow(m1_finseq_2 (k4_finseq_2 X0 X1) X1) \quad (17)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow(m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \quad (18)$$

Assume the following.

$$(v1_funct_1 k29_binop_2)\wedge((v1_funct_2 k29_binop_2 (k2_zfmisc_1 k2_numbers k2_numbers) k2_numbers)\wedge(m1_subset_1 k29_binop_2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 k2_numbers k2_numbers) k2_numbers)))) \quad (19)$$

Assume the following.

$$\forall X0.(m2_finseq_1 X0 k2_numbers)\Rightarrow(\forall X1.(m2_finseq_1 X1 k2_numbers)\Rightarrow(k5_matrixc1 X0 X1 = k1_finseqop k2_numbers k2_numbers k2_numbers k29_binop_2 X0 X1)) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_xboole_0 X2)) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(v7_ordinal1 X1))\Rightarrow(\forall X2.(m1_subset_1 X2 (k4_finseq_2 X1 X0))\Rightarrow(v3_card_1 X2 X1)) \quad (22)$$

Assume the following.

$$\forall X0.(v6_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v7_ordinal1\ X1)) \quad (23)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_finseq_1\ X0\ k2_numbers) \Rightarrow (\forall X1.(m2_finseq_1 \\ & X1\ k2_numbers) \Rightarrow (\forall X2.(m2_finseq_1\ X2\ k2_numbers) \Rightarrow (((k3_finseq_1 \\ & X0 = k3_finseq_1\ X1) \wedge (k3_finseq_1\ X1 = k3_finseq_1\ X2)) \Rightarrow (k5_matrixc1 \\ & X0\ (k5_matrixc1\ X1\ X2) = k5_matrixc1\ (k5_matrixc1\ X0\ X1)\ X2)))) \end{aligned}$$