

t18_matrixc1

(TMJwBNK3Xw1oBRi7dRX7GJBMLx2V5nufr15)

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Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k5_matrixc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_matrix_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k1_finseqop : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $k29_binop_2 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ & \quad v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge \\ & \quad (v1_funct_1 X2)) \Rightarrow (\forall X3.(X3 \in k9_xtuple_0 (k3_funcop_1 X2 \\ & \quad X0 X1)) \Rightarrow (k1_funct_1 (k3_funcop_1 X2 X0 X1) X3 = k1_binop_1 X2 (k1_funct_1 \\ & \quad X0 X3) (k1_funct_1 X1 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow (k9_matrix_5 X0 X1 = k1_funct_1 X0 X1) \tag{3}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & ((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge((\neg v1_xboole_0 X2)\wedge(\\ & ((v1_funct_1 X3)\wedge((v1_funct_2 X3 (k2_zfmisc_1 X0 X1) X2)\wedge(m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2))))))\wedge((m1_finseq_1 \\ & X4 X0)\wedge(m1_finseq_1 X5 X1))))))\Rightarrow(k1_finseqop X0 X1 X2 X3 X4 X5 = k3_funcop_1 \\ & X3 X4 X5) \end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_valued_0 X0)))\Rightarrow(v1_xcmplx_0 (k1_funct_1 X0 X1)) \tag{7}$$

Assume the following.

$$\neg v1_xboole_0 k2_numbers \tag{8}$$

Assume the following.

$$v1_membered k2_numbers \tag{9}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge(\\ & (v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ & X0)))))) \end{aligned} \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((m1_finseq_1 X0 k2_numbers)\wedge(m1_finseq_1 X1 k2_numbers))\Rightarrow(m2_finseq_1 (k5_matrixc1 X0 X1) k2_numbers) \tag{12}$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k29_binop_2)\wedge((v1_funct_2 k29_binop_2 (k2_zfmisc_1 \\ & k2_numbers k2_numbers) k2_numbers)\wedge(m1_subset_1 k29_binop_2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 k2_numbers k2_numbers) \\ & k2_numbers)))) \end{aligned} \tag{13}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_finseq_1 X0 k2_numbers)\Rightarrow(\forall X1.(m2_finseq_1 \\ & X1 k2_numbers)\Rightarrow(k5_matrixc1 X0 X1 = k1_finseqop k2_numbers k2_numbers \\ & k2_numbers k29_binop_2 X0 X1)) \end{aligned} \tag{14}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k2_zfmisc_1 k2_numbers \\ k2_numbers) k2_numbers) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ (k2_zfmisc_1 k2_numbers k2_numbers) k2_numbers)))))) \Rightarrow ((X0 = k29_binop_2) \Leftrightarrow \\ (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2.(v1_xcmplx_0 X2) \Rightarrow (\\ k1_binop_1 X0 X1 X2 = k5_binop_2 X1 X2)))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.(v1_membered X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_valued_0 X2)) \quad (17)$$

Theorem 1

$$\begin{aligned} \forall X0.(m2_finseq_1 X0 k2_numbers) \Rightarrow (\forall X1.(m2_finseq_1 \\ X1 k2_numbers) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow ((X2 \in k4_finseq_1 \\ (k5_matrixc1 X0 X1)) \Rightarrow (k9_matrix_5 (k5_matrixc1 X0 X1) X2 = k5_binop_2 \\ (k9_matrix_5 X0 X2) (k9_matrix_5 X1 X2)))))) \end{aligned}$$