

t24_matrix_2 (TMQkLUR- GLM2jg673onk3rYMYghpH2LQuadtE)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k1_group_1 : \iota \Rightarrow \iota$ be given. Let $k13_matrix_2 : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_matrix_2 : \iota \Rightarrow o$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k11_matrix_2 : \iota \Rightarrow \iota$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge (l3_algstr_0 \\ &X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((\forall X2. \\ &(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((k6_algstr_0 X0 X2 X1 = X2) \wedge \\ &(k6_algstr_0 X0 X1 X2 = X2))) \Rightarrow (X1 = k1_group_1 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. (m1_matrix_2 X1 (k12_matrix_2 X0)) \Rightarrow ((k3_relat_1 (k1_finseq_2 X0) X1 = X1) \wedge (k3_relat_1 X1 (k1_finseq_2 X0) = X1))) \quad (2)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (m1_subset_1 (k1_finseq_2 X0) (u1_struct_0 (k13_matrix_2 X0))) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (v3_matrix_2 X0)) \Rightarrow (\forall X1. (m1_matrix_2 X1 X0) \Leftrightarrow (m1_subset_1 X1 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X1)\wedge \\ & ((v1_funct_2 X1 (k2_zfmisc_1 X0 X0) X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0))))\wedge((m1_subset_1 X2 X0)\wedge \\ & (m1_subset_1 X3 X0)))\Rightarrow(k5_binop_1 X0 X1 X2 X3 = k1_binop_1 X1 X2 X3) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1))))\wedge((v1_funct_1 X5)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X2 X3))))\Rightarrow(k1_partfun1 X0 X1 X2 X3 X4 X5 = k3_relat_1 X4 X5) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0)\Rightarrow((v15_algstr_0 (k13_matrix_2 X0))\wedge \\ & ((v2_group_1 (k13_matrix_2 X0))\wedge(v3_group_1 (k13_matrix_2 X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0)\Rightarrow((\neg v2_struct_0 (k13_matrix_2 X0))\wedge \\ & (v15_algstr_0 (k13_matrix_2 X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0)\Rightarrow((\neg v1_xboole_0 (k12_matrix_2 X0))\wedge \\ & (v3_matrix_2 (k12_matrix_2 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l3_algstr_0 X0)\Rightarrow((v1_funct_1 (u2_algstr_0 X0))\wedge \\ & ((v1_funct_2 (u2_algstr_0 X0) (k2_zfmisc_1 (u1_struct_0 X0) (\\ & u1_struct_0 X0)) (u1_struct_0 X0))\wedge(m1_subset_1 (u2_algstr_0 \\ & X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (\\ & u1_struct_0 X0)) (u1_struct_0 X0)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0)\wedge(v3_matrix_2 X0))\Rightarrow(\forall X1. \\ & (m1_matrix_2 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_funct_2 X1 (k2_finseq_1 \\ & (k11_matrix_2 X0) (k2_finseq_1 (k11_matrix_2 X0)))\wedge((v3_funct_2 \\ & X1 (k2_finseq_1 (k11_matrix_2 X0) (k2_finseq_1 (k11_matrix_2 \\ & X0)))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_finseq_1 \\ & (k11_matrix_2 X0) (k2_finseq_1 (k11_matrix_2 X0)))))))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0)\Rightarrow((v15_algstr_0 (k13_matrix_2 X0))\wedge \\ & (l3_algstr_0 (k13_matrix_2 X0))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l3_algstr_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 \\ & X0 X1 X2 = k5_binop_1 (u1_struct_0 X0) (u2_algstr_0 X0) X1 X2))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v15_algstr_0 X1) \wedge \\ & (l3_algstr_0 X1)) \Rightarrow ((X1 = k13_matrix_2 X0) \Leftrightarrow ((u1_struct_0 X1 = k12_matrix_2 \\ & X0) \wedge (\forall X2.(m1_matrix_2 X2 (k12_matrix_2 X0)) \Rightarrow (\forall X3. \\ & (m1_matrix_2 X3 (k12_matrix_2 X0)) \Rightarrow (k1_binop_1 (u2_algstr_0 \\ & X1) X2 X3 = k1_partfun1 (k2_finseq_1 (k11_matrix_2 (k12_matrix_2 \\ & X0))) (k2_finseq_1 (k11_matrix_2 (k12_matrix_2 X0))) (k2_finseq_1 \\ & (k11_matrix_2 (k12_matrix_2 X0))) (k2_finseq_1 (k11_matrix_2 \\ & (k12_matrix_2 X0))) X2 X3)))))) \end{aligned} \quad (14)$$

Theorem 1

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (k1_finseq_2 X0 = k1_group_1 (k13_matrix_2 X0))$$