

t24_matrlin
(TMU9geZ9YqQ5WLxifCzCdJ4V8Vh1gLqwSaq)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k8_matrlin : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_0 : \iota$ 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 $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Assume the following.

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

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (r1_xxreal_0 k6_numbers X0) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (\neg v1_xboole_0 X2) \Rightarrow (\forall X3.(m1_matrix_1 X3 X2 X0 X1) \Rightarrow ((k3_finseq_1 \\ & X3 = X0) \wedge (k2_matrix_1 X3 = k2_zfmisc_1 (k2_finseq_1 X0) (k2_finseq_1 \\ & (k1_matrix_1 X3))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (\neg v1_xboole_0 X2) \Rightarrow ((\neg r1_xxreal_0 X0 k1_xboole_0) \Rightarrow (\forall X3. \\ & (m1_matrix_1 X3 X2 X0 X1) \Rightarrow ((k3_finseq_1 X3 = X0) \wedge ((k1_matrix_1 \\ & X3 = X1) \wedge (k2_matrix_1 X3 = k2_zfmisc_1 (k2_finseq_1 X0) (k2_finseq_1 \\ & X1)))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(\neg v1_xboole_0\ X1) \Rightarrow (\\ \forall X2.(m1_matrix_1\ X2\ X1\ k1_xboole_0\ X0) \Rightarrow ((k3_finseq_1\ X2 = \\ k1_xboole_0) \wedge ((k1_matrix_1\ X2 = k1_xboole_0) \wedge (k2_matrix_1\ X2 = \\ k1_xboole_0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0\ X0) \Rightarrow (\forall X1.(v1_xxreal_0\ X1) \Rightarrow ((\\ (r1_xxreal_0\ X0\ X1) \wedge (r1_xxreal_0\ X1\ X0)) \Rightarrow (X0 = X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(\neg v1_xboole_0\ X1) \Rightarrow (\\ m1_matrix_1\ k1_xboole_0\ X1\ k1_xboole_0\ X0)) \end{aligned} \quad (7)$$

Assume the following.

$$v1_xboole_0\ np_0 \quad (8)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ ((\neg v1_xboole_0\ X0) \wedge ((v7_ordinal1\ X1) \wedge ((v7_ordinal1\ X2) \wedge ((v7_ordinal1\ X3) \wedge ((m1_matrix_1\ X4\ X0\ X1\ X3) \wedge (m1_matrix_1\ X5\ X0\ X2\ X3)))))) \Rightarrow (\\ k8_matrlin\ X0\ X1\ X2\ X3\ X4\ X5 = k7_finseq_1\ X4\ X5) \end{aligned} \quad (10)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finseq_1\ X0))) \Rightarrow \\ (k3_finseq_1\ X0 = k1_card_1\ X0) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \exists X0.(v1_xboole_0\ X0) \wedge ((v1_xcmplx_0\ X0) \wedge ((v1_xxreal_0 \\ X0) \wedge (v1_xreal_0\ X0))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v7_ordinal1\ X0) \wedge ((\neg v1_xboole_0\ X1) \wedge \\ (v7_ordinal1\ X1))) \Rightarrow (\neg v1_xboole_0\ (k2_xcmplx_0\ X1\ X0)) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge((\neg v1_xboole_0\ X1)\wedge (v7_ordinal1\ X1)))\Rightarrow(\neg v1_xboole_0\ (k2_xcmplx_0\ X0\ X1)) \quad (15)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0\ X0)\Rightarrow((\neg v1_xboole_0\ (k1_card_1\ X0))\wedge (v1_card_1\ (k1_card_1\ X0))) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(v7_ordinal1\ X1))\Rightarrow(v7_ordinal1\ (k2_xcmplx_0\ X0\ X1)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0\ X0)\wedge((v7_ordinal1\ X1)\wedge(v7_ordinal1\ X2)))\Rightarrow(\forall X3.(m1_matrix_1\ X3\ X0\ X1\ X2)\Rightarrow (v1_matrix_1\ X3)\wedge(m2_finseq_1\ X3\ (k3_finseq_2\ X0))) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1\ X1\ X0)\Rightarrow((v1_relat_1\ X1)\wedge (v1_funct_1\ X1)\wedge(v1_finseq_1\ X1)) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. ((\neg v1_xboole_0\ X0)\wedge((v7_ordinal1\ X1)\wedge((v7_ordinal1\ X2)\wedge((v7_ordinal1\ X3)\wedge((m1_matrix_1\ X4\ X0\ X1\ X3)\wedge(m1_matrix_1\ X5\ X0\ X2\ X3))))))\Rightarrow(m1_matrix_1\ (k8_matrlin\ X0\ X1\ X2\ X3\ X4\ X5)\ X0\ (k2_xcmplx_0\ X1\ X2)\ X3) \quad (20)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(v7_ordinal1\ X0) \quad (21)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(v1_xxreal_0\ X0) \quad (22)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xreal_0\ X0) \quad (23)$$

Theorem 1

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow(\forall X2. (v7_ordinal1\ X2)\Rightarrow(\forall X3.(\neg v1_xboole_0\ X3)\Rightarrow(\forall X4. (m1_matrix_1\ X4\ X3\ X0\ X1)\Rightarrow(\forall X5.(m1_matrix_1\ X5\ X3\ X2\ X1)\Rightarrow ((k1_matrix_1\ X4 = k1_matrix_1\ X5)\Rightarrow(k1_matrix_1\ (k8_matrlin\ X3\ X0\ X2\ X1\ X4\ X5) = k1_matrix_1\ X4))))))))$$