

t42_matrixc1

(TMR5amwJ3GDKt44UV5ReMwQv1tGwDwV1Loi)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k5_matrixc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_complsp2 : \iota \Rightarrow \iota$ be given. Let $k8_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrixc1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k6_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k15_complex1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2_finseq_1 X0 k2_numbers) \Rightarrow (\forall X1.(m2_finseq_1 \\ & X1 k2_numbers) \Rightarrow ((k3_finseq_1 X0 = k3_finseq_1 X1) \Rightarrow (k1_complsp2 \\ & (k5_matrixc1 X0 (k1_complsp2 X1)) = k5_matrixc1 X1 (k1_complsp2 \\ & X0)))) \end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge (((v1_matrix_1 \\ & X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0))) \wedge (v7_ordinal1 X2))) \Rightarrow (\\ & k8_matrix_1 X0 X1 X2 = k6_matrix_1 X0 X1 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\neg v1_xboole_0 k2_numbers \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge (((v1_matrix_1 \\ & X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0))) \wedge (v7_ordinal1 X2))) \Rightarrow (\\ & m2_finseq_1 (k6_matrix_1 X0 X1 X2) X0) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_matrix_1 X0) \wedge (m1_finseq_1 X0 (k3_finseq_2 k2_numbers))) \Rightarrow \\ ((v1_matrix_1 (k1_matrixc1 X0)) \wedge (m2_finseq_1 (k1_matrixc1 X0) \\ (k3_finseq_2 k2_numbers))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge \\ (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2.(v7_ordinal1 \\ X2) \Rightarrow (\forall X3.(m2_finseq_1 X3 X0) \Rightarrow ((X3 = k6_matrix_1 X0 X1 X2) \Leftrightarrow \\ ((k3_finseq_1 X3 = k1_matrix_1 X1) \wedge (\forall X4.(v7_ordinal1 X4) \Rightarrow \\ ((X4 \in k2_finseq_1 (k1_matrix_1 X1)) \Rightarrow (k1_funct_1 X3 X4 = k3_matrix_1 \\ X0 X1 X2 X4)))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k2_numbers))) \Rightarrow \\ (\forall X1.((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k2_numbers))) \Rightarrow \\ ((X1 = k1_matrixc1 X0) \Leftrightarrow ((k3_finseq_1 X1 = k3_finseq_1 X0) \wedge ((k1_matrix_1 \\ X1 = k1_matrix_1 X0) \wedge (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3. \\ (v7_ordinal1 X3) \Rightarrow ((k4_tarski X2 X3 \in k2_matrix_1 X0) \Rightarrow (k3_matrix_1 \\ k2_numbers X1 X2 X3 = k15_complex1 (k3_matrix_1 k2_numbers X0 X2 \\ X3)))))))))) \end{aligned} \quad (8)$$

Theorem 1

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 k2_numbers) \Rightarrow \\ (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 k2_numbers))) \Rightarrow \\ ((k3_finseq_1 X1 = k1_matrix_1 X2) \Rightarrow (k5_matrixc1 X1 (k1_complsp2 \\ (k8_matrix_1 k2_numbers (k1_matrixc1 X2) X0)) = k1_complsp2 (k5_matrixc1 \\ (k8_matrix_1 k2_numbers (k1_matrixc1 X2) X0) (k1_complsp2 X1)))))) \end{aligned}$$