

t14_matrix_2

(TMb8NvUurGeFiT1mbTwa5Ng21A3K65kCQhz)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k8_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k13_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ 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 $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4_tarski X0 X1 \in k2_zfmisc_1 X2 X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge (((v1_matrix_1 X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0))) \wedge (v7_ordinal1 X2))) \Rightarrow (k9_matrix_1 X0 X1 X2 = k7_matrix_1 X0 X1 X2)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge (((v1_matrix_1 X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0))) \wedge (v7_ordinal1 X2))) \Rightarrow (k8_matrix_1 X0 X1 X2 = k6_matrix_1 X0 X1 X2)) \quad (4)$$

Assume the following.

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

Assume the following.

$$\forall X0.k3_finseq_2 X0 = k13_finseq_1 X0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (v1_funct_1 X1) \wedge (v1_finseq_1 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((v1_matrix_1 X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0))) \wedge (v7_ordinal1 X2)) \Rightarrow (m2_finseq_1 (k7_matrix_1 X0 X1 X2) X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((v1_matrix_1 X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0)))) \Rightarrow ((v1_matrix_1 (k4_matrix_1 X0 X1)) \wedge (m2_finseq_1 (k4_matrix_1 X0 X1) (k3_finseq_2 X0))) \quad (9)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(m2_finseq_1 X3 X0) \Rightarrow ((X3 = k7_matrix_1 X0 X1 X2) \Leftrightarrow ((k3_finseq_1 X3 = k3_finseq_1 X1) \wedge (\forall X4.(v7_ordinal1 X4) \Rightarrow ((X4 \in k4_finseq_1 X1) \Rightarrow (k1_funct_1 X3 X4 = k3_matrix_1 X0 X1 X4 X2)))))))) \quad (10)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2.(v7_ordinal1 X2) \Rightarrow (\forall X3.(m2_finseq_1 X3 X0) \Rightarrow ((X3 = k6_matrix_1 X0 X1 X2) \Leftrightarrow ((k3_finseq_1 X3 = k1_matrix_1 X1) \wedge (\forall X4.(v7_ordinal1 X4) \Rightarrow ((X4 \in k2_finseq_1 (k1_matrix_1 X1)) \Rightarrow (k1_funct_1 X3 X4 = k3_matrix_1 X0 X1 X2 X4)))))))) \quad (11)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 X0))) \Rightarrow ((X2 = k4_matrix_1 X0 X1) \Leftrightarrow ((k3_finseq_1 X2 = k1_matrix_1 X1) \wedge (\forall X3.(v7_ordinal1 X3) \Rightarrow (\forall X4.(v7_ordinal1 X4) \Rightarrow ((k4_tarski X3 X4 \in k2_matrix_1 X2) \Leftrightarrow (k4_tarski X4 X3 \in k2_matrix_1 X1)))) \wedge (\forall X3.(v7_ordinal1 X3) \Rightarrow (\forall X4.(v7_ordinal1 X4) \Rightarrow ((k4_tarski X4 X3 \in k2_matrix_1 X1) \Rightarrow (k3_matrix_1 X0 X2 X3 X4 = k3_matrix_1 X0 X1 X4 X3)))))))) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 \\ X0) \wedge (v1_matrix_1 X0)))) \Rightarrow (k2_matrix_1 X0 = k2_zfmisc_1 (k4_finseq_1 \\ X0) (k2_finseq_1 (k1_matrix_1 X0))) \end{aligned} \quad (13)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge \\ (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2.(v7_ordinal1 \\ X2) \Rightarrow ((X2 \in k4_finseq_1 X1) \Rightarrow (k8_matrix_1 X0 X1 X2 = k9_matrix_1 X0 \\ (k4_matrix_1 X0 X1 X2)))))) \end{aligned}$$