

t14_matrix_1 (TMW-
PoKMr3HDk94ptK7um85BqHNsmoPReP21)

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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 $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $np_1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_finseq_1 : \iota \Rightarrow o$ be given. Let $v4_card_3 : \iota \Rightarrow o$ be given. Let $k6_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (2)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 X0) \Rightarrow (m1_matrix_1 (k9_finseq_1 X1) X0 np_1 (k3_finseq_1 X1))) \quad (3)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v7_ordinal1 X0) \wedge (\neg v1_xboole_0 X1)) \Rightarrow \\ & (\exists X2. (m1_finseq_1 X2 X1) \wedge ((v1_relat_1 X2) \wedge ((v4_relat_1 \\ & X2 k5_numbers) \wedge ((v5_relat_1 X2 X1) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 \\ & X2) \wedge ((v3_card_1 X2 X0) \wedge ((v1_finseq_1 X2) \wedge ((v2_finseq_1 X2) \wedge \\ & (v4_card_3 X2)))))))))) \quad (5) \end{aligned}$$

Assume the following.

$$\forall X0.v1_xboole_0 (k6_finseq_1 X0) \quad (6)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (7)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow ((v1_xboole_0 (k1_card_1 X0)) \wedge (v1_card_1 (k1_card_1 X0))) \quad (8)$$

Assume the following.

$$\forall X0.m2_finseq_1 (k6_finseq_1 X0) X0 \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (10)$$

Assume the following.

$$\forall X0.(v3_card_1 X0 k1_xboole_0) \Rightarrow (v1_xboole_0 X0) \quad (11)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (m1_matrix_1 (k9_finseq_1 k1_xboole_0) X0 np_1 k1_xboole_0)$$