

l17_matrixj1

(TMa37dhRXLdmy5RJbaiERyNs2ye47y3c1eQ)

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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 $v1_matrixj1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_laplace : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ 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 $k4_finseq_1 : \iota \Rightarrow \iota$ 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 $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$(k2_finseq_1\ np_1 = k1_tarski\ np_1) \wedge (k2_finseq_1\ np_2 = k2_tarski\ np_1\ np_2) \tag{1}$$

Assume the following.

$$((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1\ X1\ X0) \Leftrightarrow (m1_finseq_1\ X1\ X0) \tag{3}$$

Assume the following.

$$\forall X0.k9_finseq_1\ X0 = k5_finseq_1\ X0 \tag{4}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{5}$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (6)$$

Assume the following.

$$\forall X0.k3_finseq_2 X0 = k13_finseq_1 X0 \quad (7)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_finseq_1 X1 X0)) \Rightarrow (k10_laplace X0 X1 = k5_finseq_1 X1) \quad (9)$$

Assume the following.

$$\forall X0.v1_finseq_1 (k5_finseq_1 X0) \quad (10)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow ((v1_finset_1 (k1_card_1 X0)) \wedge (v1_card_1 (k1_card_1 X0))) \quad (11)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k13_finseq_1 X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((v7_ordinal1 X1) \wedge (v7_ordinal1 X2))) \Rightarrow (\forall X3.(m1_matrix_1 X3 X0 X1 X2) \Rightarrow ((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 X0)))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (14)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k9_finseq_1 X0)) \wedge (v1_funct_1 (k9_finseq_1 X0)) \quad (15)$$

Assume the following.

$$\forall X0.v1_card_1 (k1_card_1 X0) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_finseq_1 X1 X0))\Rightarrow (m1_matrix_1 (k10_laplace X0 X1) X0 np_1 (k3_finseq_1 X1)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v1_funct_1 X1))\Rightarrow((X1 = k9_finseq_1 X0)\Leftrightarrow((k9_xtuple_0 X1 = k2_finseq_1 np_1)\wedge(k1_funct_1 X1 np_1 = X0))) \quad (18)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 (k3_finseq_2 (k3_finseq_2 X0)))\Rightarrow((v1_matrixj1 X1 X0)\Leftrightarrow(\forall X2.(v7_ordinal1 X2)\Rightarrow((X2 \in k4_finseq_1 X1)\Rightarrow((v1_matrix_1 (k1_funct_1 X1 X2))\wedge (m2_finseq_1 (k1_funct_1 X1 X2) (k3_finseq_2 X0))))))) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow (X2 = X0)) \quad (20)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (21)$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0)\wedge(v1_finset_1 X0))\Rightarrow(v7_ordinal1 X0) \quad (22)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow ((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finset_1 X0))) \quad (23)$$

Assume the following.

$$\forall X0.(v1_card_1 X0)\Rightarrow(v3_ordinal1 X0) \quad (24)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_matrix_1 X1)\wedge (m2_finseq_1 X1 (k3_finseq_2 X0)))\Rightarrow(v1_matrixj1 (k10_laplace (k3_finseq_2 X0) X1) X0))$$