

t27_matrprob
(TMMnnj8JyDjka6BrtNye6UU9XNHU4JrU155)

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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 $k1_numbers : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_matrprob : \iota \Rightarrow \iota$ be given. Let $k7_matrlin : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k18_rsum_1 : \iota \Rightarrow \iota$ be given. Let $k5_rsum_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_rsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_matrprob : \iota \Rightarrow \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrprob : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow (m2_finseq_2 X1 X0 (k4_finseq_2 (k3_finseq_1 X1) X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. (m2_finseq_2 X1 k1_numbers \\ (k4_finseq_2 X0 k1_numbers)) \Rightarrow (\forall X2. (m2_finseq_2 X2 k1_numbers \\ (k4_finseq_2 X0 k1_numbers)) \Rightarrow (k18_rsum_1 (k5_rsum_1 X0 X1 X2) = \\ k9_binop_2 (k18_rsum_1 X1) (k18_rsum_1 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow \\ (\forall X1. ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k1_numbers))) \Rightarrow \\ (k4_rsum_1 (k3_matrprob X0) (k3_matrprob X1) = k3_matrprob (k7_matrlin \\ k1_numbers X0 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1 X0)\wedge((m1_subset_1 X1 (k4_finseq_2 X0 k1_numbers))\wedge(m1_subset_1 X2 (k4_finseq_2 X0 k1_numbers))))\Rightarrow(k5_rvsum_1 X0 X1 X2 = k1_valued_1 X1 X2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v3_valued_0 X0)\wedge(v1_finseq_1 X0))))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge((v3_valued_0 X1)\wedge(v1_finseq_1 X1)))))\Rightarrow(k4_rvsum_1 X0 X1 = k1_valued_1 X0 X1) \quad (7)$$

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.

$$\forall X0.(v1_finset_1 X0)\Rightarrow((v1_finset_1 (k1_card_1 X0))\wedge(v1_card_1 (k1_card_1 X0))) \quad (9)$$

Assume the following.

$$v3_membered k1_numbers \quad (10)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0))))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge (((v1_matrix_1 \\ & X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0))) \wedge ((v1_matrix_1 X2) \wedge (m1_finseq_1 \\ & X2 (k3_finseq_2 X0)))))) \Rightarrow ((v1_matrix_1 (k7_matrlin X0 X1 X2)) \wedge \\ & (m2_finseq_1 (k7_matrlin X0 X1 X2) (k3_finseq_2 X0))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. (v7_ordinal1 X0) \Rightarrow (m1_finseq_2 (k4_finseq_2 X0 X1) X1) \quad (15)$$

Assume the following.

$$\forall X0. (m1_finseq_1 X0 (k3_finseq_2 k1_numbers)) \Rightarrow (m2_finseq_1 (k3_matrprob X0) k1_numbers) \quad (16)$$

Assume the following.

$$\forall X0. v1_card_1 (k1_card_1 X0) \quad (17)$$

Assume the following.

$$\forall X0. ((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow (k5_matrprob X0 = k18_rvsum_1 (k3_matrprob X0)) \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2_finseq_1 X0 (k3_finseq_2 k1_numbers)) \Rightarrow (\forall X1. \\ & (m2_finseq_1 X1 k1_numbers) \Rightarrow ((X1 = k3_matrprob X0) \Leftrightarrow ((k3_finseq_1 \\ & X1 = k3_finseq_1 X0) \wedge (\forall X2. (m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow \\ & ((X2 \in k4_finseq_1 X1) \Rightarrow (k1_seq_1 X1 X2 = k18_rvsum_1 (k1_matrprob \\ & k1_numbers X0 X2)))))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0. ((v3_ordinal1 X0) \wedge (v1_finset_1 X0)) \Rightarrow (v7_ordinal1 X0) \quad (20)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0))) \quad (21)$$

Assume the following.

$$\forall X0. (v1_card_1 X0) \Rightarrow (v3_ordinal1 X0) \quad (22)$$

Assume the following.

$$\forall X0. \forall X1. (v3_membered X1) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v3_valued_0 X2)) \quad (23)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & (\forall X1.((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & ((k3_finseq_1 X0 = k3_finseq_1 X1) \Rightarrow (k9_binop_2 (k5_matrprob X0) \\ & (k5_matrprob X1) = k5_matrprob (k7_matrlin k1_numbers X0 X1)))) \end{aligned}$$