

t19_entropy1
(TMcJ9FzcqteSz74v179kAdTeyrDBrGdTsX5)

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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 $v2_matrprob : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v4_partfun3 : \iota \Rightarrow o$ be given. Let $k8_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_matrprob : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v1_matrix_1 X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2. (m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow ((X2 \in k4_finseq_1 X1) \Rightarrow (k4_finseq_1 (k1_matrprob X0 X1 X2) = k2_finseq_1 (k1_matrix_1 X1)))))) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge \\ (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2.(v7_ordinal1 \\ X2) \Rightarrow ((X2 \in k4_finseq_1 X1) \Rightarrow (k1_funct_1 X1 X2 = k8_matrix_1 X0 X1 \\ X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.(\neg v1_xboole_0 \\ X2) \Rightarrow (\forall X3.((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 \\ X2))) \Rightarrow ((k4_tarSKI X0 X1 \in k2_matrix_1 X3) \Leftrightarrow ((X0 \in k4_finseq_1 X3) \wedge \\ (X1 \in k4_finseq_1 (k1_matrprob X2 X3 X0))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.((v1_relat_1 \\ X2) \wedge ((v1_funct_1 X2) \wedge ((v1_finseq_1 X2) \wedge (v1_matrix_1 X2)))) \Rightarrow \\ ((k4_tarSKI X0 X1 \in k2_matrix_1 X2) \Leftrightarrow ((X0 \in k2_finseq_1 (k3_finseq_1 \\ X2)) \wedge (X1 \in k2_finseq_1 (k1_matrix_1 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge (((v1_matrix_1 \\ X1) \wedge (m1_finseq_1 X1 (k3_finseq_2 X0))) \wedge (v7_ordinal1 X2))) \Rightarrow (\\ k8_matrix_1 X0 X1 X2 = k6_matrix_1 X0 X1 X2) \end{aligned} \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (k4_finseq_1 X0 = k9_xtuple_0 X0) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (k3_finseq_1 X0 = k1_card_1 X0) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_valued_0 X0)))\Rightarrow(k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_finseq_1 X1 (k3_finseq_2 X0))\wedge(v7_ordinal1 X2))\Rightarrow(k1_matrprob X0 X1 X2 = k1_funct_1 X1 X2) \quad (13)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (14)$$

Assume the following.

$$v3_membered k1_numbers \quad (15)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (18)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (19)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow(m1_subset_1 (k4_finseq_1 X0) (k1_zfmisc_1 k5_numbers)) \quad (20)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow(m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_finseq_1 X1 (k3_finseq_2 X0))\wedge(v7_ordinal1 X2))\Rightarrow(m2_finseq_1 (k1_matrprob X0 X1 X2) X0) \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge \\ & (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2.(v7_ordinal1 \\ & X2) \Rightarrow (\forall X3.(m2_finseq_1 X3 X0) \Rightarrow ((X3 = k6_matrix_1 X0 X1 X2) \Leftrightarrow \\ & ((k3_finseq_1 X3 = k1_matrix_1 X1) \wedge (\forall X4.(v7_ordinal1 X4) \Rightarrow \\ & ((X4 \in k2_finseq_1 (k1_matrix_1 X1)) \Rightarrow (k1_funct_1 X3 X4 = k3_matrix_1 \\ & X0 X1 X2 X4)))))))))) \end{aligned} \quad (23)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & ((v2_matrprob X0) \Leftrightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\ & (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow ((k4_tarski \\ & X1 X2 \in k2_matrix_1 X0) \Rightarrow (r1_xxreal_0 k6_numbers (k3_matrix_1 k1_numbers \\ & X0 X1 X2)))))) \end{aligned} \quad (24)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow ((X1 = k3_finseq_1 \\ & X0) \Leftrightarrow (k2_finseq_1 X1 = k9_xtuple_0 X0))) \end{aligned} \quad (25)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_finseq_1 X0 k1_numbers) \Rightarrow ((v4_partfun3 X0) \Leftrightarrow (\forall X1. \\ & (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow ((X1 \in k4_finseq_1 X0) \Rightarrow \\ & (r1_xxreal_0 k6_numbers (k1_seq_1 X0 X1)))))) \end{aligned} \quad (26)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (27)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow (v5_relat_1 X1 X0) \quad (28)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v5_relat_1 X0 k1_numbers)) \Rightarrow ((v1_relat_1 \\ X0) \wedge (v3_valued_0 X0)) \quad (29)$$

Assume the following.

$$\forall X0.\forall X1.(v3_membered X1) \Rightarrow (\forall X2.(m1_subset_1 \\ X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v3_valued_0 X2)) \quad (30)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_matrix_1 X0) \wedge (m2_finseq_1 X0 (k3_finseq_2 k1_numbers))) \Rightarrow \\ & ((v2_matrprob X0) \Leftrightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow \\ & ((X1 \in k4_finseq_1 X0) \Rightarrow (v4_partfun3 (k8_matrix_1 k1_numbers X0 \\ & X1)))))) \end{aligned}$$