

l22_matrprob

(TMM1d2wphaUdaDsQdvTm9U6n2g1oR6X5Y2H)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ 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 $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k9_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k8_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_matrprob : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $k4_ordinal1 : \iota$ 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 $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2. (\neg v1_xboole_0 \\ & X2) \Rightarrow (\forall X3. ((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 \\ & X2)))) \Rightarrow ((k4_tarski X0 X1 \in k2_matrix_1 X3) \Leftrightarrow ((X0 \in k4_finseq_1 (k9_matrix_1 \\ & X2 X3 X1)) \wedge (X1 \in k4_finseq_1 (k8_matrix_1 X2 X3 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2. (\neg v1_xboole_0 \\ & X2) \Rightarrow (\forall X3. ((v1_matrix_1 X3) \wedge (m2_finseq_1 X3 (k3_finseq_2 \\ & X2)))) \Rightarrow ((k4_tarski X0 X1 \in k2_matrix_1 X3) \Leftrightarrow ((X0 \in k4_finseq_1 X3) \wedge \\ & (X1 \in k4_finseq_1 (k1_matrprob X2 X3 X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((v1_matrix_1 X1)\wedge(m1_finseq_1 X1 (k3_finseq_2 X0)))\wedge(v7_ordinal1 X2)))\Rightarrow(k9_matrix_1 X0 X1 X2 = k7_matrix_1 X0 X1 X2) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((v1_matrix_1 X1)\wedge(m1_finseq_1 X1 (k3_finseq_2 X0)))\wedge(v7_ordinal1 X2)))\Rightarrow(k8_matrix_1 X0 X1 X2 = k6_matrix_1 X0 X1 X2) \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow(k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_valued_0 X0)))\Rightarrow(k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(\forall X1.((v1_matrix_1 X1)\wedge(m2_finseq_1 X1 (k3_finseq_2 k1_numbers)))\Rightarrow((\forall X2. \\ (m2_subset_1 X2 k1_numbers k5_numbers)\Rightarrow(\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers)\Rightarrow((k4_tarski X2 X3 \in k2_matrix_1 X1)\Rightarrow \\ (r1_xxreal_0 X0 (k3_matrix_1 k1_numbers X1 X2 X3))))))\Leftrightarrow(\forall X2. \\ (m2_subset_1 X2 k1_numbers k5_numbers)\Rightarrow(\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers)\Rightarrow(((X2 \in k4_finseq_1 X1)\wedge(X3 \in k4_finseq_1 \\ (k8_matrix_1 k1_numbers X1 X2)))\Rightarrow(r1_xxreal_0 X0 (k1_seq_1 (k8_matrix_1 \\ k1_numbers X1 X2) X3)))))) \end{aligned} \quad (10)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (11)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (12)$$

Assume the following.

$$\neg v1_xboole_0\ k1_numbers \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1\ X1\ X0)\Rightarrow((v1_funct_1\ X1)\wedge((v1_finseq_1\ X1)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ X0)))))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1\ X1\ X0)\Rightarrow((v1_relat_1\ X1)\wedge((v1_funct_1\ X1)\wedge(v1_finseq_1\ X1))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0\ X0)\wedge(((v1_matrix_1\ X1)\wedge(m1_finseq_1\ X1\ (k3_finseq_2\ X0)))\wedge(v7_ordinal1\ X2)))\Rightarrow(m2_finseq_1\ (k7_matrix_1\ X0\ X1\ X2)\ X0) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0\ X0)\wedge(((v1_matrix_1\ X1)\wedge(m1_finseq_1\ X1\ (k3_finseq_2\ X0)))\wedge(v7_ordinal1\ X2)))\Rightarrow(m2_finseq_1\ (k6_matrix_1\ X0\ X1\ X2)\ X0) \quad (17)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (18)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finseq_1\ X0)))\Rightarrow(m2_subset_1\ (k3_finseq_1\ X0)\ k1_numbers\ k5_numbers) \quad (19)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(\forall X1.((v1_matrix_1\ X1)\wedge(m2_finseq_1\ X1\ (k3_finseq_2\ X0)))\Rightarrow(\forall X2.(v7_ordinal1\ X2)\Rightarrow(\forall X3.(m2_finseq_1\ X3\ X0)\Rightarrow((X3 = k7_matrix_1\ X0\ X1\ X2)\Leftrightarrow((k3_finseq_1\ X3 = k3_finseq_1\ X1)\wedge(\forall X4.(v7_ordinal1\ X4)\Rightarrow((X4 \in k4_finseq_1\ X1)\Rightarrow(k1_funct_1\ X3\ X4 = k3_matrix_1\ X0\ X1\ X4\ X2)))))))) \quad (20)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_matrix_1 X1) \wedge \\
& (m2_finseq_1 X1 (k3_finseq_2 X0))) \Rightarrow (\forall X2.(v7_ordinal1 \\
& X2) \Rightarrow (\forall X3.(m2_finseq_1 X3 X0) \Rightarrow ((X3 = k6_matrix_1 X0 X1 X2) \Leftrightarrow \\
& ((k3_finseq_1 X3 = k1_matrix_1 X1) \wedge (\forall X4.(v7_ordinal1 X4) \Rightarrow \\
& ((X4 \in k2_finseq_1 (k1_matrix_1 X1)) \Rightarrow (k1_funct_1 X3 X4 = k3_matrix_1 \\
& X0 X1 X2 X4)))))))))
\end{aligned} \tag{21}$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \tag{22}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\
& (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow ((X1 = k3_finseq_1 \\
& X0) \Leftrightarrow (k2_finseq_1 X1 = k9_xtuple_0 X0)))
\end{aligned} \tag{23}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \tag{24}$$

Assume the following.

$$\forall X0.\forall X1.(v3_membered X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v3_valued_0 X2)) \tag{25}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.((v1_matrix_1 \\
& X1) \wedge (m2_finseq_1 X1 (k3_finseq_2 k1_numbers))) \Rightarrow ((\forall X2. \\
& (m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (\forall X3.(m2_subset_1 \\
& X3 k1_numbers k5_numbers) \Rightarrow ((k4_tarski X2 X3 \in k2_matrix_1 X1) \Rightarrow \\
& (r1_xxreal_0 X0 (k3_matrix_1 k1_numbers X1 X2 X3)))))) \Leftrightarrow (\forall X2. \\
& (m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (\forall X3.(m2_subset_1 \\
& X3 k1_numbers k5_numbers) \Rightarrow (((X3 \in k2_finseq_1 (k1_matrix_1 X1)) \wedge \\
& (X2 \in k4_finseq_1 (k9_matrix_1 k1_numbers X1 X3)) \Rightarrow (r1_xxreal_0 \\
& X0 (k1_seq_1 (k9_matrix_1 k1_numbers X1 X3) X2))))))
\end{aligned}$$