

## t22\_matrprob

(TMT5KGwgSRT7Z7wnwe1WQGm6fSkGkXzQoNk)

October 27, 2020

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  $k4\_matrprob : \iota \Rightarrow \iota$  be given. Let  $k3\_matrprob : \iota \Rightarrow \iota$  be given. Let  $k4\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_rvsum\_1 : \iota \Rightarrow \iota$  be given. Let  $k8\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k1\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  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  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\begin{aligned} \forall X0. ((v1\_matrix\_1 X0) \wedge (m2\_finseq\_1 X0 (k3\_finseq\_2 k1\_numbers))) \Rightarrow \\ ((k3\_finseq\_1 (k3\_matrprob X0) = k3\_finseq\_1 X0) \wedge (\forall X1. \\ (m2\_subset\_1 X1 k1\_numbers k5\_numbers) \Rightarrow ((X1 \in k2\_finseq\_1 (k3\_finseq\_1 \\ X0)) \Rightarrow (k1\_seq\_1 (k3\_matrprob X0) X1 = k18\_rvsum\_1 (k8\_matrix\_1 \\ k1\_numbers X0 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((v1\_matrix\_1 X1) \wedge \\ (m2\_finseq\_1 X1 (k3\_finseq\_2 X0))) \Rightarrow (\forall X2. (v7\_ordinal1 \\ X2) \Rightarrow ((X2 \in k2\_finseq\_1 (k1\_matrix\_1 X1)) \Rightarrow (k8\_matrix\_1 X0 (k4\_matrix\_1 \\ X0 X1) X2 = k9\_matrix\_1 X0 X1 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Leftrightarrow(m1\_finseq\_1 X1 X0) \quad (5)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (6)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (7)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge((v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1))) \quad (9)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((v1\_matrix\_1 X1)\wedge(m1\_finseq\_1 X1 (k3\_finseq\_2 X0))))\Rightarrow((v1\_matrix\_1 (k4\_matrix\_1 X0 X1))\wedge(m2\_finseq\_1 (k4\_matrix\_1 X0 X1) (k3\_finseq\_2 X0))) \quad (11)$$

Assume the following.

$$\forall X0.(m1\_finseq\_1 X0 (k3\_finseq\_2 k1\_numbers))\Rightarrow(m2\_finseq\_1 (k3\_matrprob X0) k1\_numbers) \quad (12)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(m1\_subset\_1 (k2\_finseq\_1 X0) (k1\_zfmisc\_1 k5\_numbers)) \quad (13)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge((v1\_finseq\_1 X0)\wedge(v1\_matrix\_1 X0))))\Rightarrow(m1\_subset\_1 (k1\_matrix\_1 X0) k5\_numbers) \quad (14)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_matrix\_1 X1) \wedge \\
& (m2\_finseq\_1 X1 (k3\_finseq\_2 X0))) \Rightarrow (\forall X2.((v1\_matrix\_1 \\
& X2) \wedge (m2\_finseq\_1 X2 (k3\_finseq\_2 X0))) \Rightarrow ((X2 = k4\_matrix\_1 X0 X1) \Leftrightarrow \\
& ((k3\_finseq\_1 X2 = k1\_matrix\_1 X1) \wedge (\forall X3.(v7\_ordinal1 \\
& X3) \Rightarrow (\forall X4.(v7\_ordinal1 X4) \Rightarrow ((k4\_tarski X3 X4 \in k2\_matrix\_1 \\
& X2) \Leftrightarrow (k4\_tarski X4 X3 \in k2\_matrix\_1 X1)))) \wedge (\forall X3.(v7\_ordinal1 \\
& X3) \Rightarrow (\forall X4.(v7\_ordinal1 X4) \Rightarrow ((k4\_tarski X4 X3 \in k2\_matrix\_1 \\
& X1) \Rightarrow (k3\_matrix\_1 X0 X2 X3 X4 = k3\_matrix\_1 X0 X1 X4 X3))))))))) \\
& \hspace{15em} (15)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_matrix\_1 X0) \wedge (m2\_finseq\_1 X0 (k3\_finseq\_2 k1\_numbers))) \Rightarrow \\
& (\forall X1.(m2\_finseq\_1 X1 k1\_numbers) \Rightarrow ((X1 = k4\_matrprob X0) \Leftrightarrow \\
& ((k3\_finseq\_1 X1 = k1\_matrix\_1 X0) \wedge (\forall X2.(v7\_ordinal1 X2) \Rightarrow \\
& ((X2 \in k2\_finseq\_1 (k1\_matrix\_1 X0)) \Rightarrow (k1\_seq\_1 X1 X2 = k18\_rvsum\_1 \\
& (k9\_matrix\_1 k1\_numbers X0 X2))))))))) \\
& \hspace{15em} (16)
\end{aligned}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (17)$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v1\_matrix\_1 X0) \wedge (m2\_finseq\_1 X0 (k3\_finseq\_2 k1\_numbers))) \Rightarrow \\
& (k4\_matrprob X0 = k3\_matrprob (k4\_matrix\_1 k1\_numbers X0))
\end{aligned}$$