

## t45\_matrix\_9

(TMXXQP5ckiToca9Wmq4gUE62H1NDwSE53x2)

October 27, 2020

Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_matrix\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k12\_matrix\_2 : \iota \Rightarrow \iota$  be given. Let  $k4\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $k4\_ordinal1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 k12\_matrix\_2 \ np\_3 = & k4\_enumset1 \ (k3\_finseq\_4 \ k5\_numbers \ np\_1 \\
 & np\_2 \ np\_3) \ (k3\_finseq\_4 \ k5\_numbers \ np\_3 \ np\_2 \ np\_1) \ (k3\_finseq\_4 \\
 & k5\_numbers \ np\_1 \ np\_3 \ np\_2) \ (k3\_finseq\_4 \ k5\_numbers \ np\_2 \ np\_3 \\
 & np\_1) \ (k3\_finseq\_4 \ k5\_numbers \ np\_2 \ np\_1 \ np\_3) \ (k3\_finseq\_4 \\
 & k5\_numbers \ np\_3 \ np\_1 \ np\_2)
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & ((v2\_xxreal\_0 \ np\_3) \wedge (m2\_subset\_1 \ np\_3 \ k1\_numbers \ k5\_numbers)) \wedge \\
 & ((m1\_subset\_1 \ np\_3 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_3 \ k1\_numbers))
 \end{aligned} \tag{2}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{3}$$

Assume the following.

$$\begin{aligned}
 & (v1\_funct\_1 \ (k3\_finseq\_4 \ k5\_numbers \ np\_3 \ np\_1 \ np\_2)) \wedge ((v1\_funct\_2 \\
 & \ (k3\_finseq\_4 \ k5\_numbers \ np\_3 \ np\_1 \ np\_2) \ (k2\_finseq\_1 \ np\_3) \\
 & \ (k2\_finseq\_1 \ np\_3)) \wedge ((v3\_funct\_2 \ (k3\_finseq\_4 \ k5\_numbers \ np\_3 \\
 & \ np\_1 \ np\_2) \ (k2\_finseq\_1 \ np\_3) \ (k2\_finseq\_1 \ np\_3)) \wedge ((v5\_matrix\_2 \\
 & \ (k3\_finseq\_4 \ k5\_numbers \ np\_3 \ np\_1 \ np\_2) \ np\_3) \wedge (m1\_subset\_1 \\
 & \ (k3\_finseq\_4 \ k5\_numbers \ np\_3 \ np\_1 \ np\_2) \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \\
 & \ (k2\_finseq\_1 \ np\_3) \ (k2\_finseq\_1 \ np\_3))))))
 \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& (v1\_funct\_1 (k3\_finseq\_4 k5\_numbers np\_2 np\_3 np\_1)) \wedge ((v1\_funct\_2 \\
& \quad (k3\_finseq\_4 k5\_numbers np\_2 np\_3 np\_1) (k2\_finseq\_1 np\_3) \\
& \quad (k2\_finseq\_1 np\_3)) \wedge ((v3\_funct\_2 (k3\_finseq\_4 k5\_numbers np\_2 \\
& \quad np\_3 np\_1) (k2\_finseq\_1 np\_3) (k2\_finseq\_1 np\_3)) \wedge ((v5\_matrix\_2 \\
& \quad (k3\_finseq\_4 k5\_numbers np\_2 np\_3 np\_1) np\_3) \wedge (m1\_subset\_1 \\
& \quad (k3\_finseq\_4 k5\_numbers np\_2 np\_3 np\_1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& \quad \quad (k2\_finseq\_1 np\_3) (k2\_finseq\_1 np\_3))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& (v1\_funct\_1 (k3\_finseq\_4 k5\_numbers np\_1 np\_2 np\_3)) \wedge ((v1\_funct\_2 \\
& \quad (k3\_finseq\_4 k5\_numbers np\_1 np\_2 np\_3) (k2\_finseq\_1 np\_3) \\
& \quad (k2\_finseq\_1 np\_3)) \wedge ((v3\_funct\_2 (k3\_finseq\_4 k5\_numbers np\_1 \\
& \quad np\_2 np\_3) (k2\_finseq\_1 np\_3) (k2\_finseq\_1 np\_3)) \wedge ((v5\_matrix\_2 \\
& \quad (k3\_finseq\_4 k5\_numbers np\_1 np\_2 np\_3) np\_3) \wedge (m1\_subset\_1 \\
& \quad (k3\_finseq\_4 k5\_numbers np\_1 np\_2 np\_3) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& \quad \quad (k2\_finseq\_1 np\_3) (k2\_finseq\_1 np\_3))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(X1 = k12\_matrix\_2 X0) \Leftrightarrow \\
& \quad (\forall X2.(X2 \in X1) \Leftrightarrow ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (k2\_finseq\_1 \\
& \quad X0) (k2\_finseq\_1 X0)) \wedge ((v3\_funct\_2 X2 (k2\_finseq\_1 X0) (k2\_finseq\_1 \\
& \quad X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_finseq\_1 \\
& \quad \quad X0) (k2\_finseq\_1 X0)))))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\
& \quad \forall X6.(X6 = k4\_enumset1 X0 X1 X2 X3 X4 X5) \Leftrightarrow (\forall X7.(X7 \in X6) \Leftrightarrow \\
& \quad (\neg(X7 \neq X0) \wedge ((X7 \neq X1) \wedge ((X7 \neq X2) \wedge ((X7 \neq X3) \wedge ((X7 \neq X4) \wedge (X7 \neq X5))))))
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \tag{9}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 (k2\_finseq\_1 np\_3) \\
& \quad (k2\_finseq\_1 np\_3)) \wedge ((v3\_funct\_2 X0 (k2\_finseq\_1 np\_3) (k2\_finseq\_1 \\
& \quad np\_3)) \wedge ((\neg v5\_matrix\_2 X0 np\_3) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 \\
& \quad \quad (k2\_zfmisc\_1 (k2\_finseq\_1 np\_3) (k2\_finseq\_1 np\_3)))))) \Rightarrow \\
& \quad (\neg(X0 \neq k3\_finseq\_4 k5\_numbers np\_3 np\_2 np\_1) \wedge ((X0 \neq k3\_finseq\_4 \\
& \quad \quad k5\_numbers np\_1 np\_3 np\_2) \wedge (X0 \neq k3\_finseq\_4 k5\_numbers np\_2 \\
& \quad \quad \quad np\_1 np\_3)))
\end{aligned}$$