

# l53\_matrix\_9 (TMYPuAKphdikwCcGHNYWse- bUUYSgwpeQMYa)

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k3\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $np\_3 : \iota$  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  $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $k1\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k11\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_matrix\_2 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k6\_partfun1 : \iota \Rightarrow \iota$  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  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$k1\_finseq\_2 \ np\_3 = k11\_finseq\_1 \ np\_1 \ np\_2 \ np\_3 \quad (1)$$

Assume the following.

$$\begin{aligned} & (k3\_finseq\_4 \ k5\_numbers \ np\_1 \ np\_3 \ np\_2 \in k12\_matrix\_2 \ np\_3) \wedge \\ & ((k3\_finseq\_4 \ k5\_numbers \ np\_2 \ np\_3 \ np\_1 \in k12\_matrix\_2 \ np\_3) \wedge \\ & ((k3\_finseq\_4 \ k5\_numbers \ np\_2 \ np\_1 \ np\_3 \in k12\_matrix\_2 \ np\_3) \wedge \\ & ((k3\_finseq\_4 \ k5\_numbers \ np\_3 \ np\_1 \ np\_2 \in k12\_matrix\_2 \ np\_3) \wedge \\ & ((k3\_finseq\_4 \ k5\_numbers \ np\_1 \ np\_2 \ np\_3 \in k12\_matrix\_2 \ np\_3) \wedge \\ & (k3\_finseq\_4 \ k5\_numbers \ np\_3 \ np\_2 \ np\_1 \in k12\_matrix\_2 \ np\_3)))) \quad (2) \end{aligned}$$

Assume the following.

$$\forall X0.(v7\_ordinal1 \ X0) \Rightarrow (v5\_matrix\_2 \ (k6\_partfun1 \ (k2\_finseq\_1 \ X0)) \ X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_3) \wedge (m2\_subset\_1 \ np\_3 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_3 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_3 \ k1\_numbers)) \quad (4) \end{aligned}$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_2) \wedge (m2\_subset\_1 \ np\_2 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_2 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_2 \ k1\_numbers)) \quad (5) \end{aligned}$$

Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1\_xboole\_0 \ X0) \wedge \\ & ((m1\_subset\_1 \ X1 \ X0) \wedge ((m1\_subset\_1 \ X2 \ X0) \wedge (m1\_subset\_1 \ X3 \ X0)))) \Rightarrow \\ & (k3\_finseq\_4 \ X0 \ X1 \ X2 \ X3 = k11\_finseq\_1 \ X1 \ X2 \ X3) \end{aligned} \quad (8)$$

Assume the following.

$$(\neg v1\_xboole\_0 \ k4\_ordinal1) \wedge (v3\_ordinal1 \ k4\_ordinal1) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v7\_ordinal1 \ X0) \Rightarrow (\forall X1. (X1 = k12\_matrix\_2 \ X0) \Leftrightarrow \\ & (\forall X2. (X2 \in X1) \Leftrightarrow ((v1\_funct\_1 \ X2) \wedge ((v1\_funct\_2 \ X2 \ (k2\_finseq\_1 \\ & X0) \ (k2\_finseq\_1 \ X0)) \wedge ((v3\_funct\_2 \ X2 \ (k2\_finseq\_1 \ X0) \ (k2\_finseq\_1 \\ & X0)) \wedge (m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (k2\_finseq\_1 \\ & X0) \ (k2\_finseq\_1 \ X0)))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 \ X0) \Rightarrow (k1\_finseq\_2 \ X0 = k6\_partfun1 \ (k2\_finseq\_1 \ X0)) \quad (11)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ k4\_ordinal1) \Rightarrow (v7\_ordinal1 \ X0) \quad (12)$$

### Theorem 1

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