

t38\_matrix\_9  
(TMd9BnSK9u5wSs7TNMDS3TcaqV1qAf7FQWS)

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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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_matrix\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $np\_1 : \iota$  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  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_partfun1 : \iota \Rightarrow \iota$  be given. Let  $k12\_matrix\_2 : \iota \Rightarrow \iota$  be given. Let  $k4\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $k9\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_finseq\_1 : \iota \Rightarrow \iota$  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. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_funct\_1 \ X0) \wedge ((v1\_funct\_2 \ X0 \ (k2\_finseq\_1 \ np\_3) \\ & (k2\_finseq\_1 \ np\_3)) \wedge ((v3\_funct\_2 \ X0 \ (k2\_finseq\_1 \ np\_3) \ (k2\_finseq\_1 \\ & \ np\_3)) \wedge (m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (k2\_finseq\_1 \\ & \ np\_3) \ (k2\_finseq\_1 \ np\_3)))))) \Rightarrow (\neg (X0 = k3\_finseq\_4 \ k5\_numbers \\ & \ np\_2 \ np\_3 \ np\_1) \wedge (v4\_matrix\_2 \ X0 \ np\_3)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_funct\_1 \ X0) \wedge ((v1\_funct\_2 \ X0 \ (k2\_finseq\_1 \ np\_3) \\ & (k2\_finseq\_1 \ np\_3)) \wedge ((v3\_funct\_2 \ X0 \ (k2\_finseq\_1 \ np\_3) \ (k2\_finseq\_1 \\ & \ np\_3)) \wedge (m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (k2\_finseq\_1 \\ & \ np\_3) \ (k2\_finseq\_1 \ np\_3)))))) \Rightarrow (\neg (X0 = k3\_finseq\_4 \ k5\_numbers \\ & \ np\_3 \ np\_1 \ np\_2) \wedge (v4\_matrix\_2 \ X0 \ np\_3)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge (( \\ v1\_funct\_2\ X1\ (k2\_finseq\_1\ X0)\ (k2\_finseq\_1\ X0)) \wedge ((v3\_funct\_2 \\ X1\ (k2\_finseq\_1\ X0)\ (k2\_finseq\_1\ X0)) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1\ (k2\_finseq\_1\ X0)\ (k2\_finseq\_1\ X0)))))) \Rightarrow (\neg(r2\_funct\_2 \\ (k2\_finseq\_1\ X0)\ (k2\_finseq\_1\ X0)\ X1\ (k6\_partfun1\ (k2\_finseq\_1 \\ X0))) \wedge (v4\_matrix\_2\ X1\ X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} k12\_matrix\_2\ np\_3 = k4\_enumset1\ (k3\_finseq\_4\ k5\_numbers\ np\_1 \\ np\_2\ np\_3)\ (k3\_finseq\_4\ k5\_numbers\ np\_3\ np\_2\ np\_1)\ (k3\_finseq\_4 \\ k5\_numbers\ np\_1\ np\_3\ np\_2)\ (k3\_finseq\_4\ k5\_numbers\ np\_2\ np\_3 \\ np\_1)\ (k3\_finseq\_4\ k5\_numbers\ np\_2\ np\_1\ np\_3)\ (k3\_finseq\_4 \\ k5\_numbers\ np\_3\ np\_1\ np\_2) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0\ np\_3) \wedge (m2\_subset\_1\ np\_3\ k1\_numbers\ k5\_numbers)) \wedge \\ ((m1\_subset\_1\ np\_3\ k5\_numbers) \wedge (m1\_subset\_1\ np\_3\ k1\_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0\ np\_2) \wedge (m2\_subset\_1\ np\_2\ k1\_numbers\ k5\_numbers)) \wedge \\ ((m1\_subset\_1\ np\_2\ k5\_numbers) \wedge (m1\_subset\_1\ np\_2\ k1\_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0\ np\_1) \wedge (m2\_subset\_1\ np\_1\ k1\_numbers\ k5\_numbers)) \wedge \\ ((m1\_subset\_1\ np\_1\ k5\_numbers) \wedge (m1\_subset\_1\ np\_1\ k1\_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X2) \wedge \\ ((v1\_funct\_2\ X2\ X0\ X1) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1 \\ X0\ X1)))))) \wedge ((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ X0\ X1) \wedge (m1\_subset\_1 \\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))) \Rightarrow ((r2\_funct\_2\ X0\ X1\ X2 \\ X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.k9\_finseq\_1\ X0 = k5\_finseq\_1\ X0 \quad (10)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0 X0)\wedge \\ & ((m1\_subset\_1 X1 X0)\wedge((m1\_subset\_1 X2 X0)\wedge(m1\_subset\_1 X3 X0))))\Rightarrow \\ & (k3\_finseq\_4 X0 X1 X2 X3 = k11\_finseq\_1 X1 X2 X3) \end{aligned} \quad (12)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.(X1 = k12\_matrix\_2 X0)\Leftrightarrow \\ & (\forall X2.(X2 \in X1)\Leftrightarrow((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 (k2\_finseq\_1 \\ & X0) (k2\_finseq\_1 X0))\wedge((v3\_funct\_2 X2 (k2\_finseq\_1 X0) (k2\_finseq\_1 \\ & X0))\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_finseq\_1 \\ & X0) (k2\_finseq\_1 X0)))))))))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.k5\_finseq\_1 X0 = k1\_tarski (k4\_tarski np\_1 X0) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & \forall X6.(X6 = k4\_enumset1 X0 X1 X2 X3 X4 X5)\Leftrightarrow(\forall X7.(X7 \in X6)\Leftrightarrow \\ & (\neg(X7 \neq X0)\wedge((X7 \neq X1)\wedge((X7 \neq X2)\wedge((X7 \neq X3)\wedge((X7 \neq X4)\wedge(X7 \neq X5)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(k1\_finseq\_2 X0 = k6\_partfun1 (k2\_finseq\_1 X0)) \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.k11\_finseq\_1 X0 X1 X2 = k7\_finseq\_1 \\ & (k7\_finseq\_1 (k9\_finseq\_1 X0) (k9\_finseq\_1 X1)) (k9\_finseq\_1 X2) \end{aligned} \quad (18)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (19)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0)\wedge((v1\_funct\_2 X0 (k2\_finseq\_1 np\_3) \\ & (k2\_finseq\_1 np\_3))\wedge((v3\_funct\_2 X0 (k2\_finseq\_1 np\_3) (k2\_finseq\_1 \\ & np\_3))\wedge(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_finseq\_1 \\ & np\_3) (k2\_finseq\_1 np\_3))))))\Rightarrow(\neg(v4\_matrix\_2 X0 np\_3)\wedge \\ & (X0 \neq k3\_finseq\_4 k5\_numbers np\_2 np\_1 np\_3)\wedge((X0 \neq k3\_finseq\_4 \\ & k5\_numbers np\_1 np\_3 np\_2)\wedge(X0 \neq k3\_finseq\_4 k5\_numbers np\_3 \\ & np\_2 np\_1)))) \end{aligned}$$