

t12\_matrix\_9 (TMJaUhZ-  
ZuiSt969Yy6SAv9NAB49RoxvXWYl)

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k2\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k13\_matrix\_2 : \iota \Rightarrow \iota$  be given. Let  $k4\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_matrix\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k12\_matrix\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_matrix\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k11\_matrix\_2 : \iota \Rightarrow \iota$  be given. Let  $k3\_group\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $v1\_xbool\_0 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_finseq\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k13\_matrix\_2 np\_2))) \Rightarrow \\ & \quad (((k4\_nat\_d (k3\_finseq\_1 X0) np\_2 = k6\_numbers) \wedge (\forall X1. \\ & \quad (v7\_ordinal1 X1) \Rightarrow (\neg(X1 \in k4\_finseq\_1 X0) \wedge (\forall X2.(m1\_matrix\_2 \\ & \quad X2 (k12\_matrix\_2 np\_2)) \Rightarrow (\neg(k1\_funct\_1 X0 X1 = X2) \wedge (v4\_matrix\_2 \\ & \quad X2 (k11\_matrix\_2 (k12\_matrix\_2 np\_2)))))))))) \Rightarrow (k3\_group\_4 (k13\_matrix\_2 \\ & \quad np\_2) X0 = k10\_finseq\_1 np\_1 np\_2)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \tag{3}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge((m1\_subset\_1 X1 X0)\wedge(m1\_subset\_1 X2 X0)))\Rightarrow(k2\_finseq\_4 X0 X1 X2 = k10\_finseq\_1 X1 X2) \quad (5)$$

Assume the following.

$$k2\_finseq\_4 k5\_numbers np\_2 np\_1 \in k12\_matrix\_2 np\_2 \quad (6)$$

Assume the following.

$$k2\_finseq\_4 k5\_numbers np\_1 np\_2 \neq k2\_finseq\_4 k5\_numbers np\_2 np\_1 \quad (7)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (8)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.(X1 = k12\_matrix\_2 X0)\Leftrightarrow (\forall X2.(X2 \in X1)\Leftrightarrow((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 (k2\_finseq\_1 X0) (k2\_finseq\_1 X0))\wedge((v3\_funct\_2 X2 (k2\_finseq\_1 X0) (k2\_finseq\_1 X0))\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_finseq\_1 X0) (k2\_finseq\_1 X0)))))))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k10\_finseq\_1 X0 X1 = k7\_finseq\_1 (k9\_finseq\_1 X0) (k9\_finseq\_1 X1) \quad (10)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 (k2\_finseq\_1 X0) (k2\_finseq\_1 X0))\wedge((v3\_funct\_2 X1 (k2\_finseq\_1 X0) (k2\_finseq\_1 X0))\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_finseq\_1 X0) (k2\_finseq\_1 X0))))))))\Rightarrow((v5\_matrix\_2 X1 X0)\Leftrightarrow(\exists X2.(m2\_finseq\_1 X2 (u1\_struct\_0 (k13\_matrix\_2 X0))))\wedge((k4\_nat\_d (k3\_finseq\_1 X2) np\_2 = k6\_numbers)\wedge((X1 = k3\_group\_4 (k13\_matrix\_2 X0) X2)\wedge(\forall X3.(v7\_ordinal1 X3)\Rightarrow(\neg(X3 \in k4\_finseq\_1 X2)\wedge(\forall X4.(m1\_matrix\_2 X4 (k12\_matrix\_2 X0))\Rightarrow(\neg(k1\_funct\_1 X2 X3 = X4)\wedge(v4\_matrix\_2 X4 (k11\_matrix\_2 (k12\_matrix\_2 X0)))))))))))))) \quad (11)$$

Assume the following.

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

**Theorem 1**

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