

t40\_matrix\_1 (TMPc-  
makp2D9yjSu4FK1NBWKMkBgmYAwhE4g)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k13\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((X0 \in k9\_xtuple\_0 X1) \Rightarrow (k1\_funct\_1 X1 X0 \in k10\_xtuple\_0 X1)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k4\_finseq\_1 X0 = k9\_xtuple\_0 X0) \quad (4)$$

Assume the following.

$$\forall X0.k3\_finseq\_2 X0 = k13\_finseq\_1 X0 \quad (5)$$

Assume the following.

$$\forall X0.\exists X1.(m1\_finseq\_1 X1 X0) \wedge ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 k5\_numbers) \wedge (v5\_relat\_1 X1 X0) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_xboole\_0 X1) \wedge ((v1\_finset\_1 X1) \wedge (v1\_finseq\_1 X1)))))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Rightarrow((v1\_funct\_1 X1)\wedge((v1\_finseq\_1 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge((v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge((v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1)))\Rightarrow((m1\_finseq\_1 X1 X0)\Leftrightarrow(r1\_tarski (k10\_xtuple\_0 X1) X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow(X2 \in X1)) \quad (10)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge(v1\_funct\_1 X0))\Rightarrow(\forall X1.\forall X2.((X1 \in k9\_xtuple\_0 X0)\Rightarrow((X2 = k1\_funct\_1 X0 X1)\Leftrightarrow(k4\_tarski X1 X2 \in X0)))\wedge((\neg X1 \in k9\_xtuple\_0 X0)\Rightarrow((X2 = k1\_funct\_1 X0 X1)\Leftrightarrow(X2 = k1\_xboole\_0)))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k13\_finseq\_1 X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow(m2\_finseq\_1 X2 X0)) \quad (12)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0 X1)\Rightarrow(\forall X2.(m2\_finseq\_1 X2 (k3\_finseq\_2 X1))\Rightarrow(m2\_finseq\_1 (k1\_funct\_1 X2 X0) X1)))$$