t3_matrix_2 (TMQxhY18eJnUDdmkbtJTJDrp5uXLs8hhVQ9)

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Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_matrix\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k1\_matrix\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_matrix\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ 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 $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5\_numbers : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_0 : \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_matrix\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X2) \wedge ((v1\_funct\_1\ X2) \wedge (v1\_finseq\_1\ X2))) \Rightarrow ((X2 = k10\_finseq\_1\ X0\ X1) \Leftrightarrow ((k3\_finseq\_1\ X2 = np\_\_2) \wedge ((k1\_funct\_1\ X2\ np\_\_1 = X0) \wedge (k1\_funct\_1\ X2\ np\_\_2 = X1)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.k10\_xtuple\_0\ (k10\_finseq\_1\ X0\ X1) = k2\_tarski\ X0\ X1 \tag{3}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_2) \wedge (m2\_subset\_1\ np\_\_2\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_\_2\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_2\ k1\_numbers)) \tag{4}$$

Assume the following.

$$v1\_xboole\_0\ np\_\_0 \tag{5}$$

Assume the following.

$$\neg r1\_xxreal\_0\ np\_\_2\ np\_\_0 \tag{6}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow (k4\_finseq\_1\ X0 = k9\_xtuple\_0\ X0) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ (k10\_finseq\_1\ X0\ X1))\wedge(v1\_funct\_1\ (k10\_finseq\_1\ X0\ X1)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.v1\_finseq\_1\ (k10\_finseq\_1\ X0\ X1) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(v1\_relat\_1\ (k3\_matrix\_2\ X0\ X1\ X2\ X3))\wedge((v1\_funct\_1\ (k3\_matrix\_2\ X0\ X1\ X2\ X3))\wedge((v1\_finseq\_1\ (k3\_matrix\_2\ X0\ X1\ X2\ X3))\wedge(v1\_matrix\_1\ (k3\_matrix\_2\ X0\ X1\ X2\ X3)))) \tag{10}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finseq\_1\ X0)\wedge(v1\_matrix\_1\ X0))))\Rightarrow(k2\_matrix\_1\ X0 = k2\_zfmisc\_1\ (k4\_finseq\_1\ X0)\ (k2\_finseq\_1\ (k1\_matrix\_1\ X0))) \tag{11}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finseq\_1\ X0)\wedge(v1\_matrix\_1\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow(((\neg r1\_xxreal\_0\ (k3\_finseq\_1\ X0)\ k1\_xboole\_0)\Rightarrow((X1 = k1\_matrix\_1\ X0)\Leftrightarrow(\exists X2.((v1\_relat\_1\ X2)\wedge((v1\_funct\_1\ X2)\wedge(v1\_finseq\_1\ X2)))\wedge((X2 \in k10\_xtuple\_0\ X0)\wedge(k3\_finseq\_1\ X2 = X1)))))\wedge((r1\_xxreal\_0\ (k3\_finseq\_1\ X0)\ k1\_xboole\_0)\Rightarrow((X1 = k1\_matrix\_1\ X0)\Leftrightarrow(X1 = k1\_xboole\_0))))) \tag{12}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow(\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow((X1 = k3\_finseq\_1\ X0)\Leftrightarrow(k2\_finseq\_1\ X1 = k9\_xtuple\_0\ X0))) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_tarski\ X0\ X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 = X0)\vee(X3 = X1))) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.k3\_matrix\_2\ X0\ X1\ X2\ X3 = k10\_finseq\_1\ (k10\_finseq\_1\ X0\ X1)\ (k10\_finseq\_1\ X2\ X3) \tag{15}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.(k3\_finseq\_1\ (k3\_matrix\_2\ X0\ X1\ X2\ X3) = np\_\_2) \wedge ((k1\_matrix\_1\ (k3\_matrix\_2\ X0\ X1\ X2\ X3) = np\_\_2) \wedge (k2\_matrix\_1\ (k3\_matrix\_2\ X0\ X1\ X2\ X3) = k2\_zfmisc\_1\ (k2\_finseq\_1\ np\_\_2)\ (k2\_finseq\_1\ np\_\_2)))$$