t7_scm_inst (TMLm29QMBSHwKoVfSsacDnsfaP9e6zeB9DS)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_scm\_inst : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $k2\_scm\_inst : \iota$ be given. Let $k7\_card\_1 : \iota \Rightarrow \iota$ be given. Let $np\_\_9 : \iota$ be given. Let $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_scm\_inst : \iota \Rightarrow \iota$ be given. Let $k8\_scm\_inst : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_finseq\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (k7\_partfun1\ X0\ (k12\_finseq\_1\ X0\ X1)\ np\_\_1 = X1)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X1\ X0)) \Rightarrow (k12\_finseq\_1\ X0\ X1 = k5\_finseq\_1\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k2\_xtuple\_0\ (k3\_xtuple\_0\ X0\ X1\ X2) = X2 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k5\_xtuple\_0\ (k3\_xtuple\_0\ X0\ X1\ X2) = X1 \tag{5}$$

Assume the following.

$$\neg v1\_xboole\_0\ k2\_scm\_inst \tag{6}$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0\ (k5\_finseq\_1\ X0) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_finseq\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0))))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X1\ X0))\Rightarrow(m2\_finseq\_1\ (k12\_finseq\_1\ X0\ X1)\ X0) \tag{10}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k3\_scm\_inst)\Rightarrow((\exists X1.(m1\_subset\_1\ X1\ k5\_numbers)\wedge(\exists X2.(m1\_subset\_1\ X2\ k2\_scm\_inst)\wedge(\exists X3.(m1\_subset\_1\ X3\ (k7\_card\_1\ np\_\_9))\wedge(X0 = k3\_xtuple\_0\ X3\ (k12\_finseq\_1\ k5\_numbers\ X1)\ (k12\_finseq\_1\ k2\_scm\_inst\ X2)))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k2\_scm\_inst)\Rightarrow((X1 = k8\_scm\_inst\ X0)\Leftrightarrow(\exists X2.(m1\_subset\_1\ X2\ k2\_scm\_inst)\wedge((k12\_finseq\_1\ k2\_scm\_inst\ X2 = k2\_xtuple\_0\ X0)\wedge(X1 = k7\_partfun1\ k2\_scm\_inst\ (k12\_finseq\_1\ k2\_scm\_inst\ X2)\ np\_\_1)))))) \tag{11}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k3\_scm\_inst)\Rightarrow((\exists X1.(m1\_subset\_1\ X1\ k5\_numbers)\wedge(\exists X2.(m1\_subset\_1\ X2\ k2\_scm\_inst)\wedge(\exists X3.(m1\_subset\_1\ X3\ (k7\_card\_1\ np\_\_9))\wedge(X0 = k3\_xtuple\_0\ X3\ (k12\_finseq\_1\ k5\_numbers\ X1)\ (k12\_finseq\_1\ k2\_scm\_inst\ X2)))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow((X1 = k7\_scm\_inst\ X0)\Leftrightarrow(\exists X2.(m1\_subset\_1\ X2\ k5\_numbers)\wedge((k12\_finseq\_1\ k5\_numbers\ X2 = k5\_xtuple\_0\ X0)\wedge(X1 = k7\_partfun1\ k5\_numbers\ (k12\_finseq\_1\ k5\_numbers\ X2)\ np\_\_1)))))) \tag{12}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0))\Rightarrow((v1\_xboole\_0\ X1)\wedge((v1\_relat\_1\ X1)\wedge(v4\_relat\_1\ X1\ X0)))) \tag{13}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v2\_finseq\_1\ X0)))\Rightarrow ((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge (v2\_finseq\_1\ X0)))) \tag{14}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow ((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v2\_finseq\_1\ X0))) \tag{15}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k3\_scm\_inst)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k2\_scm\_inst)\Rightarrow(\forall X3.\ (m1\_subset\_1\ X3\ (k7\_card\_1\ np\_\_9))\Rightarrow((X0 = k3\_xtuple\_0\ X3\ (k12\_finseq\_1\ k5\_numbers\ X1)\ (k12\_finseq\_1\ k2\_scm\_inst\ X2))\Rightarrow((k7\_scm\_inst\ X0 = X1)\wedge(k8\_scm\_inst\ X0 = X2))))))$$