t87_finseq_6 (TMUKVN3cdyZFnmRBgcAqeqkcbCxg5uXbfZK)

October 27, 2020

Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_finseq\_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_finseq\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_finseq\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_finseq\_5 : \iota \Rightarrow \iota$ be given. Let $k6\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_finseq\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ X0) \Rightarrow ((r2\_finseq\_4\ X2\ X1) \Rightarrow (k3\_finseq\_5\ (k6\_finseq\_4\ X2\ X1) = k5\_finseq\_4\ (k4\_finseq\_5\ X0\ X2)\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.(r2\_finseq\_4\ X0\ X1) \Rightarrow (X1 \in k10\_xtuple\_0\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow ((k4\_finseq\_1\ X0 = k4\_finseq\_1\ (k3\_finseq\_5\ X0)) \wedge (k10\_xtuple\_0\ X0 = k10\_xtuple\_0\ (k3\_finseq\_5\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ X0) \Rightarrow ((X1 \in k10\_xtuple\_0\ X2) \Rightarrow (k2\_finseq\_5\ X0\ X2\ X1 = k7\_finseq\_1\ (k12\_finseq\_1\ X0\ X1)\ (k6\_finseq\_4\ X2\ X1))))) \tag{4}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ X0) \Rightarrow ((X1 \in k10\_xtuple\_0\ X2) \Rightarrow (k1\_finseq\_5\ X0\ X2\ X1 = k7\_finseq\_1\ (k5\_finseq\_4\ X2\ X1)\ (k12\_finseq\_1\ X0\ X1))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1)))\Rightarrow(k3\_finseq\_5\ (k7\_finseq\_1\ (k9\_finseq\_1\ X0)\ X1) = k7\_finseq\_1\ (k3\_finseq\_5\ X1)\ (k9\_finseq\_1\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Leftrightarrow(m1\_finseq\_1\ X1\ X0) \tag{7}$$

Assume the following.

$$\forall X0.k9\_finseq\_1\ X0 = k5\_finseq\_1\ X0 \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow(k4\_finseq\_5\ X0\ X1 = k3\_finseq\_5\ X1) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X1\ X0))\Rightarrow(k12\_finseq\_1\ X0\ X1 = k5\_finseq\_1\ X1) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow((v1\_relat\_1\ (k6\_finseq\_4\ X0\ X1))\wedge((v1\_funct\_1\ (k6\_finseq\_4\ X0\ X1))\wedge(v1\_finseq\_1\ (k6\_finseq\_4\ X0\ X1)))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow(m2\_finseq\_1\ (k4\_finseq\_5\ X0\ X1)\ X0) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0)\wedge((m1\_finseq\_1\ X1\ X0)\wedge(m1\_subset\_1\ X2\ X0)))\Rightarrow(m2\_finseq\_1\ (k2\_finseq\_5\ X0\ X1\ X2)\ X0) \tag{14}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(\forall X2.(m2\_finseq\_1\ X2\ X0)\Rightarrow((r2\_finseq\_4\ X2\ X1)\Rightarrow(k4\_finseq\_5\ X0\ (k2\_finseq\_5\ X0\ X2\ X1) = k1\_finseq\_5\ X0\ (k4\_finseq\_5\ X0\ X2)\ X1))))$$