t27_finseq_7 (TMYbMyS3zVTCo3HfDUjdtJtCVoVN9zkova2)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_1 : \iota$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_finseq\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_rfinseq : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k1\_finseq\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ 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 $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2)) \wedge (v1\_xboole\_0\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow (\forall X2.(v1\_xxreal\_0\ X2) \Rightarrow (((r1\_xxreal\_0\ X0\ X1) \wedge (r1\_xxreal\_0\ X1\ X2)) \Rightarrow (r1\_xxreal\_0\ X0\ X2)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{3}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m2\_finseq\_1\ X1\ X0) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow (\forall X3.(v7\_ordinal1\ X3) \Rightarrow (k2\_finseq\_7\ X0\ X1\ X2\ X3 = k2\_finseq\_7\ X0\ X1\ X3\ X2)))) \tag{4}$$

Assume the following.

$$m1\_subset\_1\ k1\_xboole\_0\ k4\_ordinal1 \tag{5}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ X0)\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ X0)\Rightarrow (\forall X4.(v7\_ordinal1\ X4)\Rightarrow(\forall X5.(v7\_ordinal1\ X5)\Rightarrow(((r1\_xxreal\_0\ np\_\_1\ X4)\wedge(r1\_xxreal\_0\ X5\ (k3\_finseq\_1\ X1)))\Rightarrow((r1\_xxreal\_0\ X5\ X4)\vee(k1\_finseq\_7\ X0\ (k1\_finseq\_7\ X0\ X1\ X5\ X2)\ X4\ X3 = k8\_finseq\_1\ X0\ (k8\_finseq\_1\ X0\ (k8\_finseq\_1\ X0\ (k8\_finseq\_1\ X0\ (k17\_finseq\_1\ X0\ (k7\_nat\_d\ X4\ np\_\_1)\ X1)\ (k12\_finseq\_1\ X0\ X3))\ (k17\_finseq\_1\ X0\ (k7\_nat\_d\ (k7\_nat\_d\ X5\ X4)\ np\_\_1)\ (k2\_rfinseq\ X0\ X4\ X1)))\ (k12\_finseq\_1\ X0\ X2))\ (k2\_rfinseq\ X0\ X5\ X1))))))))) \tag{6}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge ((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Leftrightarrow(m1\_finseq\_1\ X1\ X0) \tag{8}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{9}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1)\wedge(v3\_ordinal1\ k4\_ordinal1) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Rightarrow(m1\_subset\_1\ X2\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X1)\wedge((v5\_relat\_1\ X1\ X0)\wedge(v1\_funct\_1\ X1)))\Rightarrow(m1\_subset\_1\ (k7\_partfun1\ X0\ X1\ X2)\ X0) \tag{13}$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \tag{14}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow (m2\_subset\_1\ (k3\_finseq\_1\ X0)\ k1\_numbers\ k5\_numbers) \tag{15}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow (\forall X2.(v7\_ordinal1\ X2)\Rightarrow(\forall X3.(v7\_ordinal1\ X3)\Rightarrow((((r1\_xxreal\_0\ np\_\_1\ X2)\wedge((r1\_xxreal\_0\ X2\ (k3\_finseq\_1\ X1))\wedge ((r1\_xxreal\_0\ np\_\_1\ X3)\wedge(r1\_xxreal\_0\ X3\ (k3\_finseq\_1\ X1)))))\Rightarrow (k2\_finseq\_7\ X0\ X1\ X2\ X3 = k1\_finseq\_7\ X0\ (k1\_finseq\_7\ X0\ X1\ X2\ (k7\_partfun1\ X0\ X1\ X3))\ X3\ (k7\_partfun1\ X0\ X1\ X2)))\wedge((\neg(r1\_xxreal\_0\ np\_\_1\ X2)\wedge ((r1\_xxreal\_0\ X2\ (k3\_finseq\_1\ X1))\wedge((r1\_xxreal\_0\ np\_\_1\ X3)\wedge(r1\_xxreal\_0\ X3\ (k3\_finseq\_1\ X1)))))\Rightarrow(k2\_finseq\_7\ X0\ X1\ X2\ X3 = X1)))))) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0)\wedge(v1\_xxreal\_0\ X1))\Rightarrow((r1\_xxreal\_0\ X0\ X1)\vee(r1\_xxreal\_0\ X1\ X0)) \tag{17}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{18}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow(v5\_relat\_1\ X1\ X0) \tag{19}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{20}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \tag{21}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow (\forall X2.(v7\_ordinal1\ X2)\Rightarrow(\forall X3.(v7\_ordinal1\ X3)\Rightarrow(((r1\_xxreal\_0\ np\_\_1\ X2)\wedge(r1\_xxreal\_0\ X3\ (k3\_finseq\_1\ X1)))\Rightarrow((r1\_xxreal\_0\ X3\ X2)\vee(k2\_finseq\_7\ X0\ X1\ X2\ X3 = k8\_finseq\_1\ X0\ (k8\_finseq\_1\ X0\ (k8\_finseq\_1\ X0\ (k8\_finseq\_1\ X0\ (k17\_finseq\_1\ X0\ (k7\_nat\_d\ X2\ np\_\_1)\ X1)\ (k12\_finseq\_1\ X0\ (k7\_partfun1\ X0\ X1\ X3)))\ (k17\_finseq\_1\ X0\ (k7\_nat\_d\ (k7\_nat\_d\ X3\ X2)\ np\_\_1)\ (k2\_rfinseq\_X0\ X2\ X1)))\ (k12\_finseq\_1\ X0\ (k7\_partfun1\ X0\ X1\ X2)))\ (k2\_rfinseq\ X0\ X3\ X1)))))))$$