

t115\_finseq\_2  
(TMbdk5gqbHGrTNIpQefQDbJ2GtaK4x1LBfv)

October 27, 2020

Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v3\_card\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $k1\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_reset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0 X1) \Rightarrow ( \\ & \quad \forall X2.((v3\_card\_1 X2 X0) \wedge (m2\_finseq\_1 X2 X1)) \Rightarrow (\forall X3. \\ & \quad ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 (k2\_finseq\_1 X0) (k2\_finseq\_1 \\ & \quad X0)) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_finseq\_1 \\ & \quad X0) (k2\_finseq\_1 X0)))))) \Rightarrow ((k10\_xtuple\_0 X3 = k2\_finseq\_1 X0) \Rightarrow \\ & \quad (m2\_finseq\_2 (k1\_partfun1 (k2\_finseq\_1 X0) (k2\_finseq\_1 X0) k5\_numbers \\ & \quad X1 X3 X2) X1 (k4\_finseq\_2 X0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2 X1 X0) \Rightarrow (\forall X2.(m2\_finseq\_2 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge (v5\_relat\_1 X1 X0)) \Rightarrow (k2\_reset\_1 X0 X1 = k10\_xtuple\_0 X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1 (k2\_zfmisc\_1 X0 X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2 X1 X0)\Rightarrow(\forall X2.(m2\_finseq\_2 X2 X0 X1)\Rightarrow(m2\_finseq\_1 X2 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(v7\_ordinal1 X0)\Rightarrow(m1\_finseq\_2 (k4\_finseq\_2 X0 X1) X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v5\_relat\_1 X1 X0))\Rightarrow((v2\_funct\_2 X1 X0)\Leftrightarrow(k2\_relset\_1 X0 X1 = X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(((v1\_funct\_1 X2)\wedge(v3\_funct\_2 X2 X0 X1))\Rightarrow((v1\_funct\_1 X2)\wedge((v2\_funct\_1 X2)\wedge(v2\_funct\_2 X2 X1)))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (9)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow(v1\_relat\_1 X1)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge(v7\_ordinal1 X1))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (k4\_finseq\_2 X1 X0))\Rightarrow(v3\_card\_1 X2 X1)) \quad (11)$$

### Theorem 1

$$\begin{aligned} &\forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0 X1)\Rightarrow( \\ &\quad \forall X2.((v3\_card\_1 X2 X0)\wedge(m2\_finseq\_1 X2 X1))\Rightarrow(\forall X3. \\ &\quad ((v1\_funct\_1 X3)\wedge((v1\_funct\_2 X3 (k2\_finseq\_1 X0) (k2\_finseq\_1 \\ &\quad X0))\wedge((v3\_funct\_2 X3 (k2\_finseq\_1 X0) (k2\_finseq\_1 X0))\wedge(m1\_subset\_1 \\ &\quad X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_finseq\_1 X0) (k2\_finseq\_1 X0))))))\Rightarrow \\ &\quad ((v3\_card\_1 (k1\_partfun1 (k2\_finseq\_1 X0) (k2\_finseq\_1 X0) k5\_numbers \\ &\quad X1 X3 X2) X0)\wedge(m2\_finseq\_1 (k1\_partfun1 (k2\_finseq\_1 X0) (k2\_finseq\_1 \\ &\quad X0) k5\_numbers X1 X3 X2) X1)))))) \end{aligned}$$