

## t38\_finseq\_2

(TMVeucZ6YDAEUPdBq5LHX4Vn9xCgDmnyYGu)

October 27, 2020

Let  $v7\_ordinal1 : \iota \Rightarrow o$  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  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0 X1) \Rightarrow ( \\ (X1 = k2\_finseq\_1 X0) \Rightarrow (\forall X2.((v1\_relat\_1 X2) \wedge ((v1\_funct\_1 \\ X2) \wedge (v1\_finseq\_1 X2)))) \Rightarrow (\forall X3.(m2\_finseq\_1 X3 X1) \Rightarrow ((r1\_xxreal\_0 \\ X0 (k3\_finseq\_1 X2)) \Rightarrow ((v1\_relat\_1 (k3\_relat\_1 X3 X2)) \wedge ((v1\_funct\_1 \\ (k3\_relat\_1 X3 X2)) \wedge (v1\_finseq\_1 (k3\_relat\_1 X3 X2)))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0 X1) \Rightarrow ( \\ \forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (k2\_finseq\_1 X0) \\ X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_finseq\_1 X0) \\ X1)))))) \Rightarrow (m2\_finseq\_1 X2 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_xboole\_0 X1) \Rightarrow (v1\_xboole\_0 (k2\_zfmisc\_1 X0 X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \wedge (( \\ v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1))) \Rightarrow ((v1\_relat\_1 (k3\_relat\_1 X0 \\ X1)) \wedge (v1\_funct\_1 (k3\_relat\_1 X0 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xboole\_0 X0) \wedge (v1\_relat\_1 X1)) \Rightarrow ((v1\_xboole\_0 (k3\_relat\_1 X0 X1)) \wedge (v1\_relat\_1 (k3\_relat\_1 X0 X1))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1 (k3\_relat\_1 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge(v1\_xboole\_0 X0))\Rightarrow((v1\_relat\_1 X0)\wedge(v1\_finseq\_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow(v1\_xboole\_0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (9)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(v1\_funct\_1 X0) \quad (10)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.(v7\_ordinal1 X1)\Rightarrow(\forall X2. \\ &((v1\_relat\_1 X2)\wedge(v1\_funct\_1 X2)\wedge(v1\_finseq\_1 X2)))\Rightarrow(\forall X3. \\ &((v1\_funct\_1 X3)\wedge((v1\_funct\_2 X3 (k2\_finseq\_1 X0) (k2\_finseq\_1 \\ &X1))\wedge(m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_finseq\_1 \\ &X0) (k2\_finseq\_1 X1))))))\Rightarrow((r1\_xxreal\_0 X1 (k3\_finseq\_1 X2))\Rightarrow \\ &(((X1 = k6\_numbers)\wedge(X0\neq k6\_numbers))\vee((v1\_relat\_1 (k3\_relat\_1 \\ &X3 X2))\wedge((v1\_funct\_1 (k3\_relat\_1 X3 X2))\wedge(v1\_finseq\_1 (k3\_relat\_1 \\ &X3 X2)))))))))) \end{aligned}$$