

# t39\_finseq\_3 (TMRbqsWEKzHZKCtrBTg- wbG14SnSYAcPSyv)

October 27, 2020

Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k14\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $r2\_wellord2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $k5\_numbers : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k1\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  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  $k1\_numbers : \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (r2\_wellord2 X0 X1) \Leftrightarrow (k1\_card\_1 X0 = k1\_card\_1 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (k5\_card\_1 (k2\_finseq\_1 X0) = X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (4)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.(v1\_finset\_1 X0) \Rightarrow (k5\_card\_1 X0 = k1\_card\_1 X0) \quad (6)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (k2\_finseq\_1 X0 = k1\_finseq\_1 X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(v7\_ordinal1 X1) \Rightarrow ((r1\_tarSKI X0 (k2\_finseq\_1 X1)) \Rightarrow (v2\_funct\_1 (k14\_finseq\_1 X0))) \quad (8)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \quad (9)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (v1\_finset\_1 (k1\_finseq\_1 X0)) \quad (10)$$

Assume the following.

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

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (12)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (m2\_subset\_1 (k3\_finseq\_1 X0) k1\_numbers k5\_numbers) \quad (13)$$

Assume the following.

$$\forall X0.m2\_finseq\_1 (k14\_finseq\_1 X0) k5\_numbers \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(r2\_wellord2 X0 X1) \Leftrightarrow (\exists X2.((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \wedge ((v2\_funct\_1 X2) \wedge ((k9\_xtuple\_0 X2 = X0) \wedge (k10\_xtuple\_0 X2 = X1)))) \quad (15)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (\forall X1.(m2\_subset\_1 X1 k1\_numbers k5\_numbers) \Rightarrow ((X1 = k3\_finseq\_1 X0) \Leftrightarrow (k2\_finseq\_1 X1 = k9\_xtuple\_0 X0))) \quad (16)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\exists X1.(v7\_ordinal1\ X1)\wedge(r1\_tarski\ X0\ (k2\_finseq\_1 \\
& X1)))\Rightarrow(\forall X1.(m2\_finseq\_1\ X1\ k5\_numbers)\Rightarrow((X1 = k14\_finseq\_1 \\
& X0)\Leftrightarrow((k10\_xtuple\_0\ X1 = X0)\wedge(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(\forall X3. \\
& (v7\_ordinal1\ X3)\Rightarrow(\forall X4.(v7\_ordinal1\ X4)\Rightarrow(\forall X5.( \\
& v7\_ordinal1\ X5)\Rightarrow(\neg(r1\_xreal\_0\ np\_1\ X2)\wedge(\neg r1\_xreal\_0\ X3\ X2)\wedge \\
& ((r1\_xreal\_0\ X3\ (k3\_finseq\_1\ X1))\wedge((X4 = k1\_funct\_1\ X1\ X2)\wedge(( \\
& X5 = k1\_funct\_1\ X1\ X3)\wedge(r1\_xreal\_0\ X5\ X4))))))))))
\end{aligned} \tag{17}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{18}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_xboole\_0\ X1)) \tag{19}$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v1\_finset\_1\ X1)\Rightarrow((r1\_tarski\ X1\ (k2\_finseq\_1\ X0))\Rightarrow(k3\_finseq\_1\ (k14\_finseq\_1\ X1) = k5\_card\_1\ X1)))$$