

## t44\_finseq\_3

(TMJ9WNx6JwjqJKvEe6zgrZkCWoH5B9EBx4K)

October 27, 2020

Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k14\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k9\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_card\_1 : \iota \Rightarrow \iota$  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  $np\_1 : \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  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  $k1\_xboole\_0 : \iota$  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  $k5\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow ((X0 = k6\_numbers) \vee (X0 \in k2\_finseq\_1 X0)) \quad (1)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v1\_finset\_1 X1) \Rightarrow ((r1\_tarski X1 (k2\_finseq\_1 X0)) \Rightarrow (k3\_finseq\_1 (k14\_finseq\_1 X1) = k5\_card\_1 X1))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \Rightarrow ((X1 = k9\_finseq\_1 X0) \Leftrightarrow ((k3\_finseq\_1 X1 = np\_1) \wedge (k10\_xtuple\_0 X1 = k1\_tarski X0))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski (k1\_tarski X0) X1) \Leftrightarrow (X0 \in X1) \quad (4)$$

Assume the following.

$$\forall X0.k1\_card\_1 (k1\_tarski X0) = np\_1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (6)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (7)$$

Assume the following.

$$\forall X0.(v1\_finset\_1 X0) \Rightarrow (k5\_card\_1 X0 = k1\_card\_1 X0) \quad (8)$$

Assume the following.

$$\forall X0.v1\_finset\_1 (k1\_tarski X0) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Rightarrow & ((v1\_funct\_1 X1) \wedge ( \\ (v1\_finseq\_1 X1) \wedge (m1\_subset\_1 X1 & (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers \\ X0)))))) \end{aligned} \quad (10)$$

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.

$$\forall X0.m2\_finseq\_1 (k14\_finseq\_1 X0) k5\_numbers \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(\exists X1.(v7\_ordinal1 X1) \wedge (r1\_tarski X0 & (k2\_finseq\_1 \\ X1))) \Rightarrow (\forall X1.(m2\_finseq\_1 X1 k5\_numbers) \Rightarrow & ((X1 = k14\_finseq\_1 \\ X0) \Leftrightarrow ((k10\_xtuple\_0 X1 = X0) \wedge (\forall X2.(v7\_ordinal1 & X2) \Rightarrow (\forall X3. \\ (v7\_ordinal1 X3) \Rightarrow (\forall X4.(v7\_ordinal1 X4) \Rightarrow (\forall X5. & ( \\ v7\_ordinal1 X5) \Rightarrow (\neg(r1\_xxreal\_0 np\_1 X2) \wedge ((\neg r1\_xxreal\_0 & X3 X2) \wedge \\ ((r1\_xxreal\_0 X3 (k3\_finseq\_1 X1)) \wedge ((X4 = k1\_funct\_1 & X1 X2) \wedge (( \\ X5 = k1\_funct\_1 X1 X3) \wedge (r1\_xxreal\_0 X5 X4))))))))))))) \end{aligned} \quad (13)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow ((k6\_numbers \neq X0) \Rightarrow (k14\_finseq\_1 (k1\_tarski X0) = k9\_finseq\_1 X0))$$