

## t83\_finseq\_6

(TMZzci3K65eBcQcaC5FfRQFVaznLgWaYYiK)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k2\_finseq\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_rfinseq : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  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  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  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  $k4\_ordinal1 : \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow ( \\ \forall X2.(m1\_subset\_1\ X2\ X1) \Rightarrow (\forall X3.(m2\_finseq\_1\ X3\ X1) \Rightarrow \\ ((X2 \in k10\_xtuple\_0\ X3) \Rightarrow ((r1\_xxreal\_0\ (k4\_finseq\_4\ X3\ X2)\ X0) \vee \\ (k2\_finseq\_5\ X1\ (k2\_rfinseq\ X1\ X0\ X3)\ X2 = k2\_finseq\_5\ X1\ X3\ X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow \\ (\forall X1.(X1 \in k10\_xtuple\_0\ X0) \Rightarrow ((r1\_xxreal\_0\ np\_1\ (k4\_finseq\_4 \\ X0\ X1)) \wedge (r1\_xxreal\_0\ (k4\_finseq\_4\ X0\ X1)\ (k3\_finseq\_1\ X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow (( \\ (r1\_xxreal\_0\ X0\ X1) \wedge (r1\_xxreal\_0\ X1\ X0)) \Rightarrow (X0 = X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0\ np\_1) \wedge (m2\_subset\_1\ np\_1\ k1\_numbers\ k5\_numbers)) \wedge \\ ((m1\_subset\_1\ np\_1\ k5\_numbers) \wedge (m1\_subset\_1\ np\_1\ k1\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \quad (5)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge(v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow(m1\_subset\_1 (k4\_finseq\_4 X0 X1) k5\_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (9)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(v1\_xxreal\_0 X0) \quad (10)$$

**Theorem 1**

$$\forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 X0)\Rightarrow(\forall X2.(m2\_finseq\_1 X2 X0)\Rightarrow((X1 \in k10\_xtuple\_0 X2)\Rightarrow((k4\_finseq\_4 X2 X1 = np\_1)\vee(k2\_finseq\_5 X0 (k2\_rfinseq X0 np\_1 X2) X1 = k2\_finseq\_5 X0 X2 X1))))))$$