

## l79\_finseq\_3

(TMHF6HVMnAM9PiNmJBPLYPFFndiqH7zebbs)

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Let  $k1\_finseq\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_finseq\_1 : \iota \Rightarrow \iota$  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  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k5\_finseq\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (\forall X1.(k1\_finseq\_3 X0 X1 = X0) \Leftrightarrow (r1\_xboole\_0 X1 (k10\_xtuple\_0 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (\neg(\neg r1\_xboole\_0 X0 X1) \wedge (\forall X2. \neg(X2 \in \\ & X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2.(X2 \in X0) \wedge (X2 \in X1)) \wedge (r1\_xboole\_0 \\ & X0 X1)) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0. k9\_finseq\_1 X0 = k5\_finseq\_1 X0 \quad (4)$$

Assume the following.

$$\forall X0. v1\_finseq\_1 (k5\_finseq\_1 X0) \quad (5)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 (k5\_finseq\_1 X0)) \wedge (v1\_funct\_1 (k5\_finseq\_1 X0)) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1\_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (7)$$

**Theorem 1**

$$\forall X0. \forall X1. (k1\_finseq\_3 (k9\_finseq\_1 X0) X1 = k9\_finseq\_1 X0) \Leftrightarrow (\neg X0 \in X1)$$