

t73\_finseq\_6

(TMS31GQQ6LoNrQqF2PFMhkBDFjqW3AZFjcj)

October 27, 2020

Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k17\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m2\_finseq\_1 X1 X0) \Rightarrow \\ (\forall X2. (v7\_ordinal1 X2) \Rightarrow (\forall X3. (v7\_ordinal1 X3) \Rightarrow ( \\ (r1\_xxreal\_0 X2 X3) \Rightarrow ((k17\_finseq\_1 X0 X3 (k17\_finseq\_1 X0 X2 X1) = \\ k17\_finseq\_1 X0 X2 X1) \wedge (k17\_finseq\_1 X0 X2 (k17\_finseq\_1 X0 X3 X1) = \\ k17\_finseq\_1 X0 X2 X1))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow ( \\ (r1\_xxreal\_0 X0 X1) \vee (r1\_xxreal\_0 X1 X0)) \tag{2}$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (v1\_xxreal\_0 X0) \tag{3}$$

**Theorem 1**

$$\begin{aligned} \forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow ( \\ \forall X2. (m2\_finseq\_1 X2 X1) \Rightarrow (k17\_finseq\_1 X1 X0 (k17\_finseq\_1 \\ X1 X0 X2) = k17\_finseq\_1 X1 X0 X2))) \end{aligned}$$