

t2\_finseq\_7  
(TMUTrnoAf38rYRh94pgY1K8s6Krzfw7wdw7)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  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  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 \\ X1)))) \Rightarrow (k3\_finseq\_1 (k7\_finseq\_1 X0 X1) = k2\_nat\_1 (k3\_finseq\_1 \\ X0) (k3\_finseq\_1 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (( \\ v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1)))) \Rightarrow (\forall X2.((v1\_relat\_1 \\ X2) \wedge ((v1\_funct\_1 X2) \wedge (v1\_finseq\_1 X2)))) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 \\ (k3\_finseq\_1 X1)) \wedge (((r1\_xxreal\_0 X0 (k2\_nat\_1 (k3\_finseq\_1 X1) \\ (k3\_finseq\_1 X2))) \vee (r1\_xxreal\_0 X0 (k3\_finseq\_1 (k7\_finseq\_1 \\ X1 X2)))))) \wedge (k1\_funct\_1 (k7\_finseq\_1 X1 X2) X0 \neq k1\_funct\_1 X2 (k5\_real\_1 \\ X0 (k3\_finseq\_1 X1)))))) \end{aligned} \quad (2)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (( \\ v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1)))) \Rightarrow (\forall X2.((v1\_relat\_1 \\ X2) \wedge ((v1\_funct\_1 X2) \wedge (v1\_finseq\_1 X2)))) \Rightarrow (\forall X3.((v1\_relat\_1 \\ X3) \wedge ((v1\_funct\_1 X3) \wedge (v1\_finseq\_1 X3)))) \Rightarrow (((k3\_finseq\_1 X2 = \\ k3\_finseq\_1 X3) \wedge (r1\_xxreal\_0 X0 (k3\_finseq\_1 (k7\_finseq\_1 X2 \\ X1)))) \Rightarrow ((r1\_xxreal\_0 X0 (k3\_finseq\_1 X2)) \vee (k1\_funct\_1 (k7\_finseq\_1 \\ X2 X1) X0 = k1\_funct\_1 (k7\_finseq\_1 X3 X1) X0)))))) \end{aligned}$$