

t51\_finseq\_3  
(TMJLHdt2731snLHjHbJJSS9DV2Sb6WC4ovG)

October 27, 2020

Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  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  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_card\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge (( \\ v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow (\forall X2.((v1\_relat\_1 \\ X2) \wedge ((v1\_funct\_1\ X2) \wedge (v1\_finseq\_1\ X2))) \Rightarrow ((X2 = k5\_relat\_1\ X1 \\ (k2\_finseq\_1\ X0)) \Rightarrow (r1\_xxreal\_0\ (k3\_finseq\_1\ X2)\ (k3\_finseq\_1 \\ X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (k5\_relat\_1 \\ (k1\_finseq\_2\ (k2\_xcmplx\_0\ X0\ X1))\ (k2\_finseq\_1\ X0) = k1\_finseq\_2 \\ X0)) \quad (2)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\neg \\ (r1\_xxreal\_0\ X0\ X1) \wedge (\forall X2.(v7\_ordinal1\ X2) \Rightarrow (X1 \neq k2\_xcmplx\_0 \\ X0\ X2)))) \quad (3)$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow \\ (k3\_finseq\_1\ X0 = k1\_card\_1\ X0) \quad (4)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow ((v1\_relat\_1\ (k1\_finseq\_2\ X0)) \wedge \\ ((v1\_funct\_1\ (k1\_finseq\_2\ X0)) \wedge ((v3\_card\_1\ (k1\_finseq\_2\ X0) \\ X0) \wedge (v1\_finseq\_1\ (k1\_finseq\_2\ X0)))))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(v3\_card\_1\ X1\ X0) \Leftrightarrow (k1\_card\_1\ X1 = X0) \quad (6)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow ((k5\_relat\_1\ (k1\_finseq\_2\ X0)\ (k2\_finseq\_1\ X1) = k1\_finseq\_2\ X1) \Leftrightarrow (r1\_xreal\_0\ X1\ X0)))$$