

t52\_finseq\_4

(TMJfr19mKkwtbWKT6BtEJRa5H5oCn8Bby18)

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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  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k5\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((v2\_funct\_1 X1) \Rightarrow (v2\_funct\_1 (k5\_relat\_1 X1 X0))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow ((v1\_relat\_1 (k5\_finseq\_4 X0 X1)) \wedge ((v1\_funct\_1 (k5\_finseq\_4 X0 X1)) \wedge (v1\_finseq\_1 (k5\_finseq\_4 X0 X1)))) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. & ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (\forall X1. (X1 \in k10\_xtuple\_0 X0) \Rightarrow (\forall X2. ((v1\_relat\_1 X2) \wedge \\ & ((v1\_funct\_1 X2) \wedge (v1\_finseq\_1 X2)))) \Rightarrow ((X2 = k5\_finseq\_4 X0 X1) \Leftrightarrow \\ & (\exists X3. (v7\_ordinal1 X3) \wedge ((X3 = k6\_xcmplx\_0 (k4\_finseq\_4 X0 X1) np\_1) \wedge (X2 = k5\_relat\_1 X0 (k2\_finseq\_1 X3)))))) \end{aligned} \quad (3)$$

**Theorem 1**

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (\forall X1. ((X1 \in k10\_xtuple\_0 X0) \wedge (v2\_funct\_1 X0)) \Rightarrow (v2\_funct\_1 (k5\_finseq\_4 X0 X1)))$$