

## t85\_finseq\_3

(TMHn2xMvscMbKF8UxE1V1Po91uNX2gZgYP8)

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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  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_finseq\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k3\_finseq\_1 X0 = k1\_card\_1 X0) \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \Rightarrow (\forall X2.(k3\_finseq\_1 X1 = X0) \Rightarrow (\forall X3.(v7\_ordinal1 X3) \Rightarrow ((X3 \in k1\_relset\_1 k5\_numbers X1) \Rightarrow (\forall X4.(v1\_finset\_1 X4) \Rightarrow (\neg(X4 = ReplSep (toset (\lambda X5 : \iota.m1\_subset\_1 X5 k5\_numbers)) (\lambda X5 : \iota.(X5 \in k1\_relset\_1 k5\_numbers X1) \wedge ((r1\_xxreal\_0 X5 X3) \wedge (k1\_funct\_1 X1 X5 \in X2))) (\lambda X5 : \iota.X5) \wedge ((\neg k1\_funct\_1 X1 X3 \in X2) \wedge (k1\_funct\_1 (k1\_finseq\_3 X1 X2) (k6\_xcmplx\_0 X3 (k5\_card\_1 X4)) \neq k1\_funct\_1 X1 X3)))))))))) \tag{3} \end{aligned}$$

Assume the following.

$$\forall X0.(v1\_finset\_1 X0) \Rightarrow ((v1\_finset\_1 (k1\_card\_1 X0)) \wedge (v1\_card\_1 (k1\_card\_1 X0))) \tag{4}$$

Assume the following.

$$\forall X0.((v3\_ordinal1 X0) \wedge (v1\_finset\_1 X0)) \Rightarrow (v7\_ordinal1 X0) \tag{5}$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1\_card\_1 X0)\Rightarrow(v3\_ordinal1 X0) \quad (7)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow \\ &(\forall X1.\forall X2.(v7\_ordinal1 X2)\Rightarrow((X2 \in k1\_relset\_1 k5\_numbers \\ &X0)\Rightarrow(\forall X3.(v1\_finset\_1 X3)\Rightarrow(\neg(X3 = ReplSep (toset (\lambda X4 : \\ &\iota.m1\_subset\_1 X4 k5\_numbers)) (\lambda X4 : \iota.(X4 \in k1\_relset\_1 \\ &k5\_numbers X0)\wedge((r1\_xxreal\_0 X4 X2)\wedge(k1\_funct\_1 X0 X4 \in X1)))) (\lambda X4 : \iota.X4)\wedge((\neg k1\_funct\_1 X0 X2 \in X1)\wedge(k1\_funct\_1 (k1\_finseq\_3 \\ &X0 X1) (k6\_xcmplx\_0 X2 (k5\_card\_1 X3))\neq k1\_funct\_1 X0 X2)))))) \end{aligned}$$