

# t62\_finseq\_4 (TMKGHmTLsMP- sWqbsk3qbyJHgtaxTs8tWfaH)

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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  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k5\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v2\_funct\_1 X0) \Rightarrow (k1\_card\_1 (k9\_xtuple\_0 X0) = k1\_card\_1 (k10\_xtuple\_0 X0))) \quad (1)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (k1\_card\_1 X0 = k1\_card\_1 (k9\_xtuple\_0 X0)) \quad (2)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1)))) \Rightarrow (((k10\_xtuple\_0 X0 = k10\_xtuple\_0 X1) \wedge ((k3\_finseq\_1 X0 = k3\_finseq\_1 X1) \wedge (v2\_funct\_1 X1))) \Rightarrow (v2\_funct\_1 X0)) \quad (3)$$

Assume the following.

$$\forall X0. \neg (v1\_finset\_1 X0) \wedge (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1)))) \Rightarrow (\neg (k10\_xtuple\_0 X1 = X0) \wedge (v2\_funct\_1 X1)) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_finset\_1 X0) \Leftrightarrow (\exists X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1)))) \wedge (X0 = k10\_xtuple\_0 X1) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_finset\_1 X0) \Rightarrow (k5\_card\_1 X0 = k1\_card\_1 X0) \quad (6)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k3\_finseq\_1 X0 = k1\_card\_1 X0) \quad (7)$$

**Theorem 1**

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ ((v2\_funct\_1 X0) \Leftrightarrow (k5\_card\_1 (k10\_xtuple\_0 X0) = k3\_finseq\_1 X0))$$