t66_finseq_2 (TMM53iPK2exWrQMZ9YtsvNxVwg6bgoyXPRP)

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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 $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (k4\_finseq\_1\ X0 = k9\_xtuple\_0\ X0) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((r1\_tarski\ (k2\_zfmisc\_1\ (k1\_tarski\ X0)\ (k10\_xtuple\_0\ X1))\ (k9\_xtuple\_0\ X2)) \Rightarrow (k9\_xtuple\_0\ (k5\_funcop\_1\ X2\ X0\ X1) = k4\_finseq\_1\ X1))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \wedge ((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2))) \Rightarrow ((v1\_relat\_1\ (k5\_funcop\_1\ X0\ X1\ X2)) \wedge (v1\_funct\_1\ (k5\_funcop\_1\ X0\ X1\ X2))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow ((v1\_finseq\_1\ X0) \Leftrightarrow (\exists X1.(v7\_ordinal1\ X1) \wedge (k9\_xtuple\_0\ X0 = k2\_finseq\_1\ X1))) \tag{4}$$

Theorem 1

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge (v1\_funct\_1\ X2)) \Rightarrow ((r1\_tarski\ (k2\_zfmisc\_1\ (k1\_tarski\ X0)\ (k10\_xtuple\_0\ X1))\ (k9\_xtuple\_0\ X2)) \Rightarrow ((v1\_relat\_1\ (k5\_funcop\_1\ X2\ X0\ X1)) \wedge ((v1\_funct\_1\ (k5\_funcop\_1\ X2\ X0\ X1)) \wedge (v1\_finseq\_1\ (k5\_funcop\_1\ X2\ X0\ X1))))))$$