t38_finseq_5 (TMJwPu3R4o3jDnjXFxqveojMGCFmmXwZY93)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (\forall X1.(X1 \in k10\_xtuple\_0\ X0) \Rightarrow (k4\_finseq\_4\ X0\ X1 \in k4\_finseq\_1\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (\forall X1.(X1 \in k10\_xtuple\_0\ X0) \Rightarrow (k1\_funct\_1\ X0\ (k4\_finseq\_4\ X0\ X1) = X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (k4\_finseq\_1\ X0 = k9\_xtuple\_0\ X0) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0) \Rightarrow ((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge ((v5\_relat\_1\ X1\ X0) \wedge (v1\_funct\_1\ X1))) \Rightarrow (\forall X2.(X2 \in k9\_xtuple\_0\ X1) \Rightarrow (k7\_partfun1\ X0\ X1\ X2 = k1\_funct\_1\ X1\ X2)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow(v5\_relat\_1\ X1\ X0) \tag{7}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ X0)\Rightarrow((X1 \in k10\_xtuple\_0\ X2)\Rightarrow(k7\_partfun1\ X0\ X2\ (k4\_finseq\_4\ X2\ X1) = X1))))$$