t72_finseq_4 (TM-Mdhc1bn1qK5rU6WUPwq6T3abv4v9dmxGR)

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Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_card\_1 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X1) \Rightarrow (r1\_tarski\ (k10\_xtuple\_0\ (k5\_relat\_1\ X1\ X0))\ (k10\_xtuple\_0\ X1)) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow ((v2\_funct\_1\ X0) \Leftrightarrow (k5\_card\_1\ (k10\_xtuple\_0\ X0) = k3\_finseq\_1\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.\neg(v1\_finset\_1\ X0) \wedge (\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow (\neg(k10\_xtuple\_0\ X1 = X0) \wedge (v2\_funct\_1\ X1))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v1\_funct\_1\ X1)) \Rightarrow ((v2\_funct\_1\ X1) \Rightarrow (v2\_funct\_1\ (k5\_relat\_1\ X1\ X0))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1)))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v1\_funct\_1\ X2)\wedge(v1\_finseq\_1\ X2)))\Rightarrow(((r1\_xxreal\_0\ X0\ (k3\_finseq\_1\ X1))\wedge(X2 = k5\_relat\_1\ X1\ (k2\_finseq\_1\ X0)))\Rightarrow((k3\_finseq\_1\ X2 = X0)\wedge(k4\_finseq\_1\ X2 = k2\_finseq\_1\ X0))))) \tag{6}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1)))\Rightarrow((v1\_relat\_1\ (k5\_relat\_1\ X1\ (k2\_finseq\_1\ X0)))\wedge((v1\_funct\_1\ (k5\_relat\_1\ X1\ (k2\_finseq\_1\ X0)))\wedge(v1\_finseq\_1\ (k5\_relat\_1\ X1\ (k2\_finseq\_1\ X0)))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\Rightarrow((v1\_relat\_1\ (k5\_relat\_1\ X0\ X1))\wedge(v1\_funct\_1\ (k5\_relat\_1\ X0\ X1))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ X0)\Rightarrow(v1\_relat\_1\ (k5\_relat\_1\ X0\ X1)) \tag{9}$$

Assume the following.

$$\forall X0.(v1\_finset\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_finset\_1\ X1)) \tag{10}$$

Theorem 1

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v1\_finset\_1\ X1)\Rightarrow(\neg (r1\_xxreal\_0\ X0\ (k5\_card\_1\ X1))\wedge(\forall X2.((v1\_finset\_1\ X2)\wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X1)))\Rightarrow(k5\_card\_1\ X2\neq X0))))$$