

t42_finseq_1 (TMbH-
pAqSQ3eg3A2oCvxnv75a1U8XGWYoB49)

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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 $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$(k2_finseq_1\ np_1 = k1_tarski\ np_1) \wedge (k2_finseq_1\ np_2 = k2_tarski\ np_1\ np_2) \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1\ X1) \wedge ((v1_funct_1\ X1) \wedge (v1_finseq_1\ X1))) \Rightarrow (\forall X2. ((v1_relat_1\ X2) \wedge ((v1_funct_1\ X2) \wedge (v1_finseq_1\ X2)))) \Rightarrow (\neg(X0 \in k4_finseq_1\ X1) \wedge (\forall X3. (v7_ordinal1\ X3) \Rightarrow (\neg(X3 = X0) \wedge (k2_nat_1\ (k3_finseq_1\ X2)\ X3 \in k4_finseq_1\ (k7_finseq_1\ X2\ X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. k9_finseq_1\ X0 = k5_finseq_1\ X0 \tag{3}$$

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.

$$\forall X0. v1_finseq_1\ (k5_finseq_1\ X0) \tag{5}$$

Assume the following.

$$\forall X0. (v1_relat_1\ (k9_finseq_1\ X0)) \wedge (v1_funct_1\ (k9_finseq_1\ X0)) \tag{6}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 \\ X0)))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))))\Rightarrow \\ ((v1_relat_1 (k7_finseq_1 X0 X1))\wedge((v1_funct_1 (k7_finseq_1 \\ X0 X1))\wedge(v1_finseq_1 (k7_finseq_1 X0 X1)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge(v1_funct_1 X1))\Rightarrow((X1 = \\ k9_xtuple_0 X1)\Leftrightarrow((k9_xtuple_0 X1 = k2_finseq_1 np_1)\wedge(k1_funct_1 \\ X1 np_1 = X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ (\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 \\ X1)))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v1_finseq_1 \\ X2))))\Rightarrow((X2 = k7_finseq_1 X0 X1)\Leftrightarrow((k4_finseq_1 X2 = k2_finseq_1 \\ (k2_nat_1 (k3_finseq_1 X0) (k3_finseq_1 X1))))\wedge((\forall X3.(\\ v7_ordinal1 X3)\Rightarrow((X3 \in k4_finseq_1 X0)\Rightarrow(k1_funct_1 X2 X3 = k1_funct_1 \\ X0 X3))))\wedge(\forall X3.(v7_ordinal1 X3)\Rightarrow((X3 \in k4_finseq_1 X1)\Rightarrow \\ (k1_funct_1 X2 (k2_nat_1 (k3_finseq_1 X0) X3) = k1_funct_1 X1 X3)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(X1 = k1_tarski X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow \\ (X2 = X0)) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 \\ X1)))\Rightarrow(k1_funct_1 (k7_finseq_1 X1 (k9_finseq_1 X0)) (k2_nat_1 \\ (k3_finseq_1 X1) np_1) = X0) \end{aligned}$$