# t41_finseq_1 (TMMkyVGxvReFFyzbwADbjPgPi7crSLKJwjo)

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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 $np\_\_1 : \iota$ be given. Let $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ 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 $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow ((X1 = k9\_finseq\_1\ X0) \Leftrightarrow ((k4\_finseq\_1\ X1 = k2\_finseq\_1\ np\_\_1) \wedge (k10\_xtuple\_0\ X1 = k1\_tarski\ X0))) \tag{1}$$

Assume the following.

$$(k2\_finseq\_1\ np\_\_1 = k1\_tarski\ np\_\_1) \wedge (k2\_finseq\_1\ np\_\_2 = k2\_tarski\ np\_\_1\ np\_\_2) \tag{2}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1) \wedge (m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers)) \wedge ((m1\_subset\_1\ np\_\_1\ k5\_numbers) \wedge (m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{3}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k9\_finseq\_1\ X0)) \wedge (v1\_funct\_1\ (k9\_finseq\_1\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\wedge((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))))\Rightarrow((v1\_relat\_1\ (k7\_finseq\_1\ X0\ X1))\wedge((v1\_funct\_1\ (k7\_finseq\_1\ X0\ X1))\wedge(v1\_finseq\_1\ (k7\_finseq\_1\ X0\ X1)))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v1\_funct\_1\ X1))\Rightarrow((X1 = k9\_finseq\_1\ X0)\Leftrightarrow((k9\_xtuple\_0\ X1 = k2\_finseq\_1\ np\_\_1)\wedge(k1\_funct\_1\ X1\ np\_\_1 = X0))) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1)))\Rightarrow(\forall X2.((v1\_relat\_1\ X2)\wedge((v1\_funct\_1\ X2)\wedge(v1\_finseq\_1\ X2)))\Rightarrow((X2 = k7\_finseq\_1\ X0\ X1)\Leftrightarrow((k4\_finseq\_1\ X2 = k2\_finseq\_1\ (k2\_nat\_1\ (k3\_finseq\_1\ X0)\ (k3\_finseq\_1\ X1)))\wedge((\forall X3.(v7\_ordinal1\ X3)\Rightarrow((X3 \in k4\_finseq\_1\ X0)\Rightarrow(k1\_funct\_1\ X2\ X3 = k1\_funct\_1\ X0\ X3)))\wedge(\forall X3.(v7\_ordinal1\ X3)\Rightarrow((X3 \in k4\_finseq\_1\ X1)\Rightarrow(k1\_funct\_1\ X2\ (k2\_nat\_1\ (k3\_finseq\_1\ X0)\ X3) = k1\_funct\_1\ X1\ X3)))))))) \tag{8}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow((v1\_finseq\_1\ X0)\Leftrightarrow(\exists X1.(v7\_ordinal1\ X1)\wedge(k9\_xtuple\_0\ X0 = k2\_finseq\_1\ X1))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_tarski\ X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow(X2 = X0)) \tag{10}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{11}$$

**Theorem 1**

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1)))\Rightarrow(k1\_funct\_1\ (k7\_finseq\_1\ (k9\_finseq\_1\ X0)\ X1)\ np\_\_1 = X0)$$