

l35_finseq_7

(TMUo6rm5iTp9e2zwevLj37AuAL5bQPhNyqd)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_funct_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_finseq_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ & \forall X3.(X2 \neq X3) \Rightarrow (k1_funct_1 (k2_funct_7 X0 X2 X1) X3 = k1_funct_1 \\ & \quad X0 X3)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & ((m1_finseq_1 X1 X0) \wedge ((v7_ordinal1 X2) \wedge (m1_subset_1 X3 X0)))) \Rightarrow \\ & (k1_finseq_7 X0 X1 X2 X3 = k2_funct_7 X1 X2 X3) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (v1_funct_1 X1) \wedge (v1_finseq_1 X1)) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1 X1) \wedge ((v5_relat_1 \\ & X1 X0) \wedge (v1_funct_1 X1))) \Rightarrow (m1_subset_1 (k7_partfun1 X0 X1 X2) X0) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & ((m1_finseq_1 X1 X0)\wedge((v7_ordinal1 X2)\wedge(m1_subset_1 X3 X0))))\Rightarrow \\ & (m2_finseq_1 (k1_finseq_7 X0 X1 X2 X3) X0) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 X0)\Rightarrow \\ & (\forall X2.(v7_ordinal1 X2)\Rightarrow(\forall X3.(v7_ordinal1 X3)\Rightarrow(\\ & ((r1_xxreal_0 np_1 X2)\wedge((r1_xxreal_0 X2 (k3_finseq_1 X1))\wedge \\ & (r1_xxreal_0 np_1 X3)\wedge(r1_xxreal_0 X3 (k3_finseq_1 X1))))))\Rightarrow \\ & (k2_finseq_7 X0 X1 X2 X3 = k1_finseq_7 X0 (k1_finseq_7 X0 X1 X2 (k7_partfun1 \\ & X0 X1 X3)) X3 (k7_partfun1 X0 X1 X2))\wedge((\neg(r1_xxreal_0 np_1 X2)\wedge \\ & ((r1_xxreal_0 X2 (k3_finseq_1 X1))\wedge((r1_xxreal_0 np_1 X3)\wedge(\\ & r1_xxreal_0 X3 (k3_finseq_1 X1))))))\Rightarrow(k2_finseq_7 X0 X1 X2 X3 = X1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(v5_relat_1 X1 X0) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 X0)\Rightarrow \\ & (\forall X2.(v7_ordinal1 X2)\Rightarrow(\forall X3.(v7_ordinal1 X3)\Rightarrow(\\ & \forall X4.(v7_ordinal1 X4)\Rightarrow(\neg(X2\neq X3)\wedge((X4\neq X3)\wedge(k1_funct_1 \\ & (k2_finseq_7 X0 X1 X2 X4) X3\neq k1_funct_1 X1 X3)))))) \end{aligned}$$