

t23_finseq_7

(TMJQTQ37m7T2Y8Hg3sYHvnPkWuUh9dUPjmCo)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_finseq_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ 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 $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_finseq_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 \\ & X2) \wedge (v1_finseq_1 X2))) \Rightarrow ((X2 = k10_finseq_1 X0 X1) \Leftrightarrow ((k3_finseq_1 \\ & X2 = np_2) \wedge ((k1_funct_1 X2 np_1 = X0) \wedge (k1_funct_1 X2 np_2 = X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1. (v7_ordinal1 X1) \Rightarrow ((X1 \in k1_relset_1 k5_numbers X0) \Leftrightarrow \\ & ((r1_xxreal_0 np_1 X1) \wedge (r1_xxreal_0 X1 (k3_finseq_1 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 X0) \Rightarrow (\forall X3. (m1_subset_1 X3 X0) \Rightarrow \\ & (k1_finseq_7 X0 (k2_finseq_4 X0 X1 X2) np_2 X3 = k2_finseq_4 X0 X1 \\ & X3)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (\forall X3.(m1_subset_1 X3 X0) \Rightarrow \\ (k1_finseq_7 X0 (k2_finseq_4 X0 X1 X2) np_1 X3 = k2_finseq_4 X0 X3 \\ X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$r1_xxreal_0 np_2 np_2 \quad (7)$$

Assume the following.

$$r1_xxreal_0 np_1 np_2 \quad (8)$$

Assume the following.

$$r1_xxreal_0 np_1 np_1 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (10)$$

Assume the following.

$$\forall X0.k9_finseq_1 X0 = k5_finseq_1 X0 \quad (11)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((m1_subset_1 \\ X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k2_finseq_4 X0 X1 X2 = k10_finseq_1 \\ X1 X2) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (\\ k1_relset_1 X0 X1 = k9_xtuple_0 X1) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(v1_relat_1 (k10_finseq_1 X0 X1)) \wedge (v1_funct_1 \\ (k10_finseq_1 X0 X1)) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.v1_finseq_1 (k10_finseq_1 X0 X1) \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 \\ X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(m2_finseq_1 (k2_finseq_4 X0 X1 X2) \\ X0) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.k10_finseq_1 X0 X1 = k7_finseq_1 (k9_finseq_1 X0) (k9_finseq_1 X1) \quad (18)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v5_relat_1 X1 X0)\wedge \\ v1_funct_1 X1))\Rightarrow(\forall X2.(X2 \in k9_xtuple_0 X1)\Rightarrow(k7_partfun1 \\ X0 X1 X2 = k1_funct_1 X1 X2)) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.k5_finseq_1 X0 = k1_tarski (k4_tarski np_1 X0) \quad (20)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 X0)\Rightarrow \\ (\forall X2.(v7_ordinal1 X2)\Rightarrow(\forall X3.(v7_ordinal1 X3)\Rightarrow(\\ (((r1_xxreal_0 np_1 X2)\wedge((r1_xxreal_0 X2 (k3_finseq_1 X1))\wedge \\ (r1_xxreal_0 np_1 X3)\wedge(r1_xxreal_0 X3 (k3_finseq_1 X1))))\Rightarrow \\ (k2_finseq_7 X0 X1 X2 X3 = k1_finseq_7 X0 (k1_finseq_7 X0 X1 X2 (k7_partfun1 \\ X0 X1 X3)) X3 (k7_partfun1 X0 X1 X2))))\wedge((\neg(r1_xxreal_0 np_1 X2)\wedge \\ ((r1_xxreal_0 X2 (k3_finseq_1 X1))\wedge((r1_xxreal_0 np_1 X3)\wedge(\\ r1_xxreal_0 X3 (k3_finseq_1 X1))))\Rightarrow(k2_finseq_7 X0 X1 X2 X3 = X1)))))) \end{aligned} \quad (21)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (22)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ ((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge \\ (v1_finseq_1 X0)))) \end{aligned} \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(v5_relat_1 X1 X0) \quad (24)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow \\ (\forall X2.(m1_subset_1 X2 X0)\Rightarrow(k2_finseq_7 X0 (k2_finseq_4 \\ X0 X1 X2) np_1 np_2 = k2_finseq_4 X0 X2 X1))) \end{aligned}$$