

t21_finsop_1 (TMaSHQnbyumZLfvUWN- LoZwHN4nd46dv4oTL)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_finsop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. \forall X2. (m2_finseq_1 \\ & X2 X1) \Rightarrow (((r1_xxreal_0 np_1 X0) \wedge (r1_xxreal_0 X0 (k3_finseq_1 \\ & X2)))) \Rightarrow (k7_partfun1 X1 X2 X0 = k1_funct_1 X2 X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 X0) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge \\ & ((v1_funct_2 X3 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))) \Rightarrow (k1_finsop_1 X0 (k2_finseq_4 \\ & X0 X1 X2) X3 = k5_binop_1 X0 X3 X1 X2))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \text{ np_2}) \wedge (m2_subset_1 \text{ np_2 } k1_numbers \text{ k5_numbers})) \wedge \\ & ((m1_subset_1 \text{ np_2 } k5_numbers) \wedge (m1_subset_1 \text{ np_2 } k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \text{ np_1}) \wedge (m2_subset_1 \text{ np_1 } k1_numbers \text{ k5_numbers})) \wedge \\ & ((m1_subset_1 \text{ np_1 } k5_numbers) \wedge (m1_subset_1 \text{ np_1 } k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$r1_xxreal_0 \text{ np_2 } np_2 \quad (6)$$

Assume the following.

$$r1_xxreal_0 \text{ np_1 } np_2 \quad (7)$$

Assume the following.

$$r1_xxreal_0 \text{ np_1 } np_1 \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 \text{ X1 } X0) \Leftrightarrow (m1_finseq_1 \text{ X1 } X0) \quad (9)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1_funct_1 \text{ X1}) \wedge \\ & ((v1_funct_2 \text{ X1 } (k2_zfmisc_1 \text{ X0 } X0) \text{ X0}) \wedge (m1_subset_1 \text{ X1 } (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 \text{ X0 } X0) \text{ X0})))))) \wedge ((m1_subset_1 \text{ X2 } X0) \wedge \\ & (m1_subset_1 \text{ X3 } X0))) \Rightarrow (k5_binop_1 \text{ X0 } X1 \text{ X2 } X3 = k1_binop_1 \text{ X1 } X2 \text{ X3}) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 \text{ X0}) \wedge ((m1_subset_1 \\ & \text{ X1 } X0) \wedge (m1_subset_1 \text{ X2 } X0))) \Rightarrow (k2_finseq_4 \text{ X0 } X1 \text{ X2} = k10_finseq_1 \\ & \text{ X1 } X2) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2_finseq_1 \text{ X1 } X0) \Rightarrow ((v1_funct_1 \text{ X1}) \wedge (\\ & (v1_finseq_1 \text{ X1}) \wedge (m1_subset_1 \text{ X1 } (k1_zfmisc_1 (k2_zfmisc_1 \text{ k5_numbers} \\ & \text{ X0})))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_finseq_1 \text{ X1 } X0) \Rightarrow ((v1_relat_1 \text{ X1}) \wedge (\\ & (v1_funct_1 \text{ X1}) \wedge (v1_finseq_1 \text{ X1}))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_relat_1 X1)\wedge((v5_relat_1 X1 X0)\wedge(v1_funct_1 X1)))\Rightarrow(m1_subset_1 (k7_partfun1 X0 X1 X2) X0) \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(v5_relat_1 X1 X0) \quad (17)$$

Theorem 1

$$\begin{aligned} &\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 X0)\Rightarrow \\ &(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 (k2_zfmisc_1 X0 \\ &X0) X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ &X0 X0) X0))))))\Rightarrow((k3_finseq_1 X1 = np_2)\Rightarrow(k1_finsop_1 X0 X1 X2 = \\ &k1_binop_1 X2 (k1_funct_1 X1 np_1) (k1_funct_1 X1 np_2)))) \end{aligned}$$