

t122_finseq_2
(TMP36GpwuYhffCNhWfQYKfGJkCKsKEeYPKM)

October 27, 2020

Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow (m2_finseq_2 X1 X0 (k4_finseq_2 (k3_finseq_1 X1) X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. (m1_subset_1 X3 X1) \Rightarrow \\ & (\forall X4. ((v1_relat_1 X4) \wedge ((v1_funct_1 X4) \wedge (v1_finseq_1 \\ & X4)))) \Rightarrow (\forall X5. ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 (k2_zfmisc_1 \\ & X0 X1) X2) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1) X2)))))) \Rightarrow (\forall X6. (m2_finseq_1 X6 X0) \Rightarrow ((X4 = k4_funcop_1 \\ & X5 X6 X3) \Rightarrow (k3_finseq_1 X4 = k3_finseq_1 X6)))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. (\neg v1_xboole_0 X2) \Rightarrow (\forall X3. (m1_subset_1 X3 X1) \Rightarrow \\ & (\forall X4. ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 (k2_zfmisc_1 X0 \\ & X1) X2) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1) X2)))))) \Rightarrow (\forall X5. (m2_finseq_1 X5 X0) \Rightarrow (m2_finseq_1 (\\ & k4_funcop_1 X4 X5 X3) X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge(v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(v3_card_1 X1 X0)\Leftrightarrow(k1_card_1 X1 = X0) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.(\neg v1_xboole_0 X1)\Rightarrow(\\ & \forall X2.(\neg v1_xboole_0 X2)\Rightarrow(\forall X3.(\neg v1_xboole_0 X3)\Rightarrow \\ & (\forall X4.(m1_subset_1 X4 X2)\Rightarrow(\forall X5.((v1_funct_1 X5)\wedge \\ & ((v1_funct_2 X5 (k2_zfmisc_1 X1 X2) X3)\wedge(m1_subset_1 X5 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X1 X2) X3))))))\Rightarrow(\forall X6.((v3_card_1 \\ & X6 X0)\wedge(m2_finseq_1 X6 X1))\Rightarrow(m2_finseq_2 (k4_funcop_1 X5 X6 X4) \\ & X3 (k4_finseq_2 X0 X3))))))))) \end{aligned}$$