

t145_finseq_2
(TMbWersL3vfJAw7kuAd8hftaHxSZqTEGKgz)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k6_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k13_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1. \forall X2. k3_relat_1 (k2_finseq_2 X0 X1) (k16_funcop_1 X1 X2) = k2_finseq_2 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 (k3_relat_1 X1 X2) X0 = k1_funct_1 X2 (k1_funct_1 X1 X0)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. k1_funct_2 X0 X1 = k4_card_3 (k7_funcop_1 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(¬v1_xboole_0 X1)\Rightarrow(k9_funct_2 X0 X1 = k1_funct_2 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k7_funcop_1 X0 X1 = k2_funcop_1 X0 X1 \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.\forall X3.((¬v1_xboole_0 X0)\wedge \\ &(((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ &(k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0)))\Rightarrow(k3_funct_2 X0 \\ &X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.k3_finseq_2 X0 = k13_finseq_1 X0 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (11)$$

Assume the following.

$$(¬v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (12)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (13)$$

Assume the following.

$$\forall X0.¬v1_xboole_0 (k13_finseq_1 X0) \quad (14)$$

Assume the following.

$$\begin{aligned} &\forall X0.(v1_funct_1 (k7_finseq_2 X0))\wedge((v1_funct_2 (k7_finseq_2 \\ &X0) k5_numbers (k3_finseq_2 (k1_tarSKI X0)))\wedge(m1_subset_1 (k7_finseq_2 \\ &X0) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k3_finseq_2 (k1_tarSKI \\ &X0)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge \\ (v1_funct_1 X1)\wedge(v1_partfun1 X1 X0))))\Rightarrow((v1_relat_1 (k6_finseq_2 \\ X0 X1))\wedge((v4_relat_1 (k6_finseq_2 X0 X1) (k3_finseq_2 X0))\wedge((\\ v1_funct_1 (k6_finseq_2 X0 X1))\wedge(v1_partfun1 (k6_finseq_2 X0 \\ X1) (k3_finseq_2 X0)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0)))\Rightarrow(m1_subset_1 (\\ k3_funct_2 X0 X1 X2 X3) X1) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.m1_finseq_2 (k3_finseq_2 X0) X0 \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.k16_funcop_1 X0 X1 = k7_funcop_1 (k1_tarski X0) X1 \quad (19)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_funct_1 X1)\wedge((v1_funct_2 X1 k5_numbers \\ (k3_finseq_2 (k1_tarski X0))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (\\ k2_zfmisc_1 k5_numbers (k3_finseq_2 (k1_tarski X0))))))\Rightarrow((\\ X1 = k7_finseq_2 X0)\Leftrightarrow(\forall X2.(m1_subset_1 X2 k5_numbers)\Rightarrow \\ (k3_funct_2 k5_numbers (k3_finseq_2 (k1_tarski X0)) X1 X2 = k2_finseq_2 \\ X2 X0))) \end{aligned} \quad (20)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge(\\ (v1_funct_1 X1)\wedge(v1_partfun1 X1 X0))))\Rightarrow(\forall X2.((v1_relat_1 \\ X2)\wedge((v4_relat_1 X2 (k3_finseq_2 X0))\wedge((v1_funct_1 X2)\wedge(v1_partfun1 \\ X2 (k3_finseq_2 X0))))))\Rightarrow((X2 = k6_finseq_2 X0 X1)\Leftrightarrow(\forall X3. \\ (m2_finseq_2 X3 X0 (k3_finseq_2 X0))\Rightarrow(k1_funct_1 X2 X3 = k4_card_3 \\ (k3_relat_1 X3 X1)))) \end{aligned} \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.k2_funcop_1 X0 X1 = k2_zfmisc_1 X0 (k1_tarski X1) \quad (22)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.k2_finseq_2 X0 X1 = k7_funcop_1 (k2_finseq_1 X0) X1) \quad (23)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (((X1 \neq k1_xboole_0) \Rightarrow ((v1_funct_2 X2 X0 \\ & X1) \Leftrightarrow (X0 = k1_relset_1 X0 X2))) \wedge ((X1 = k1_xboole_0) \Rightarrow ((v1_funct_2 \\ & X2 X0 X1) \Leftrightarrow (X2 = k1_xboole_0)))) \end{aligned} \quad (24)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (25)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \end{aligned} \quad (26)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \end{aligned} \quad (27)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 k5_numbers) \Rightarrow \\ & (\forall X2.\forall X3.((v1_relat_1 X3) \wedge ((v4_relat_1 X3 (k1_tarski \\ & X2)) \wedge ((v1_funct_1 X3) \wedge (v1_partfun1 X3 (k1_tarski X2)))))) \Rightarrow ((\\ & X3 = k16_funcop_1 X2 X0) \Rightarrow (k1_funct_1 (k3_relat_1 (k7_finseq_2 \\ & X2) (k6_finseq_2 (k1_tarski X2) X3)) X1 = k9_funct_2 (k2_finseq_1 \\ & X1) X0)))) \end{aligned}$$