

t17_finseqop
(TMZy1vqVKtnhn17s9Z1v9TWxVV1WGPPzPds)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_finseqop : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k4_tarSKI : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ 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 $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ & \forall X3.(k4_tarSKI X2 X3 \in k9_xtuple_0 X0) \Rightarrow (k3_funcop_1 X0 (\\ & k7_funcop_1 X1 X2) (k7_funcop_1 X1 X3) = k7_funcop_1 X1 (k1_binop_1 \\ & X0 X2 X3))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \Rightarrow (r2_relset_1 X0 X1 X2 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((v7_ordinal1 X1)\wedge(m1_subset_1 X2 X0)))\Rightarrow(k5_finseq_2 X0 X1 X2 = k2_finseq_2 X1 X2) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. ((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(((v1_funct_1 X3)\wedge(v1_funct_2 X3 (k2_zfmisc_1 X0 X1) X2)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2))))\wedge((m1_subset_1 X4 X0)\wedge(m1_subset_1 X5 X1))))))\Rightarrow(k2_binop_1 X0 X1 X2 X3 X4 X5 = k1_binop_1 X3 X4 X5) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. ((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge((\neg v1_xboole_0 X2)\wedge(((v1_funct_1 X3)\wedge((v1_funct_2 X3 (k2_zfmisc_1 X0 X1) X2)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X1) X2))))\wedge((m1_finseq_1 X4 X0)\wedge(m1_finseq_1 X5 X1))))))\Rightarrow(k1_finseqop X0 X1 X2 X3 X4 X5 = k3_funcop_1 X3 X4 X5) \quad (8)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 X2 X0 X1)\Rightarrow(m2_finseq_1 X2 X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((v7_ordinal1 X1)\wedge(m1_subset_1 X2 X0)))\Rightarrow(m2_finseq_2 (k5_finseq_2 X0 X1 X2) X0 (k4_finseq_2 X1 X0)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(v7_ordinal1\ X0)\Rightarrow(m1_finseq_2\ (k4_finseq_2\ X0\ X1)\ X1) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & ((\neg v1_xboole_0\ X0)\wedge(\neg v1_xboole_0\ X1)\wedge((v1_funct_1\ X3)\wedge((v1_funct_2\ X3\ (k2_zfmisc_1\ X0\ X1)\ X2)\wedge(m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)\ X2))))\wedge((m1_subset_1\ X4\ X0)\wedge(m1_subset_1\ X5\ X1))))\Rightarrow(m1_subset_1\ (k2_binop_1\ X0\ X1\ X2\ X3\ X4\ X5)\ X2) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_zfmisc_1\ X0\ X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow(\exists X4.\exists X5.(X4 \in X0)\wedge((X5 \in X1)\wedge(X3 = k4_tarSKI\ X4\ X5)))) \quad (15)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.k2_finseq_2\ X0\ X1 = k7_funcop_1\ (k2_finseq_1\ X0)\ X1) \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(((X1\neq k1_xboole_0)\Rightarrow((v1_funct_2\ X2\ X0\ X1)\Leftrightarrow(X0 = k1_relset_1\ X0\ X2)))\wedge((X1 = k1_xboole_0)\Rightarrow((v1_funct_2\ X2\ X0\ X1)\Leftrightarrow(X2 = k1_xboole_0)))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(\forall X1.(\neg v1_xboole_0\ X1)\Rightarrow \\ & (\forall X2.(\neg v1_xboole_0\ X2)\Rightarrow(\forall X3.(m1_subset_1\ X3\ X0)\Rightarrow \\ & (\forall X4.(m1_subset_1\ X4\ X1)\Rightarrow(\forall X5.(v7_ordinal1\ X5)\Rightarrow \\ & (\forall X6.((v1_funct_1\ X6)\wedge((v1_funct_2\ X6\ (k2_zfmisc_1\ X0\ X1)\ X2)\wedge(m1_subset_1\ X6\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)\ X2))))\Rightarrow(r2_relset_1\ k5_numbers\ X2\ (k1_finseqop\ X0\ X1\ X2\ X6\ (k5_finseq_2\ X0\ X5\ X3)\ (k5_finseq_2\ X1\ X5\ X4)\ (k5_finseq_2\ X2\ X5\ (k2_binop_1\ X0\ X1\ X2\ X6\ X3\ X4)))))))))) \end{aligned}$$