

t14_finsop_1
(TMXSqCWWpT49AAUgGs9MzKnJ2EVgbiM8MFc)

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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 $v1_funct_1 : \iota \Rightarrow o$ 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 $k1_finsop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_setwiseo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k8_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $np_2 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ & \quad (\forall X2. (m2_finseq_1 X2 X0) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge \\ & \quad ((v1_funct_2 X3 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & \quad (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))) \Rightarrow (((v1_setwiseo X3 X0) \vee \\ & \quad (r1_xxreal_0 np_1 (k3_finseq_1 X2))) \Rightarrow (k1_finsop_1 X0 (k8_finseq_1 \\ & \quad X0 X2 (k12_finseq_1 X0 X1)) X3 = k5_binop_1 X0 X3 (k1_finsop_1 X0 X2 \\ & \quad X3) X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 \\ & \quad X2) \wedge (v1_finseq_1 X2))) \Rightarrow ((X2 = k10_finseq_1 X0 X1) \Leftrightarrow ((k3_finseq_1 \\ & \quad X2 = np_2) \wedge ((k1_funct_1 X2 np_1 = X0) \wedge (k1_funct_1 X2 np_2 = X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (k11_finseq_1 X0 X1 X2 = k7_finseq_1 \\ & \quad (k9_finseq_1 X0) (k10_finseq_1 X1 X2)) \wedge (k11_finseq_1 X0 X1 X2 = \\ & \quad k7_finseq_1 (k10_finseq_1 X0 X1) (k9_finseq_1 X2)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge \\ ((v1_funct_2 X3 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))) \Rightarrow (k1_finsop_1 X0 (k2_finseq_4 \\ X0 X1 X2) X3 = k5_binop_1 X0 X3 X1 X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$r1_xxreal_0 np_1 np_2 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (6)$$

Assume the following.

$$\forall X0.k9_finseq_1 X0 = k5_finseq_1 X0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_finseq_1 X1 X0) \wedge (m1_finseq_1 \\ X2 X0)) \Rightarrow (k8_finseq_1 X0 X1 X2 = k7_finseq_1 X1 X2) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ ((m1_subset_1 X1 X0) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X0)))) \Rightarrow \\ (k3_finseq_4 X0 X1 X2 X3 = k11_finseq_1 X1 X2 X3) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((m1_subset_1 \\ X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k2_finseq_4 X0 X1 X2 = k10_finseq_1 \\ X1 X2) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow \\ (k12_finseq_1 X0 X1 = k5_finseq_1 X1) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(v1_relat_1 (k10_finseq_1 X0 X1)) \wedge (v1_funct_1 \\ (k10_finseq_1 X0 X1)) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.v1_finseq_1 (k10_finseq_1 X0 X1) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(m2_finseq_1 (k2_finseq_4 X0 X1 X2) X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow (m2_finseq_1 (k12_finseq_1 X0 X1) X0) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 X0)\Rightarrow(\forall X3.(m1_subset_1 X3 X0)\Rightarrow \\ & (\forall X4.((v1_funct_1 X4)\wedge((v1_funct_2 X4 (k2_zfmisc_1 X0 \\ & X0) X0)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0) X0))))))\Rightarrow(k1_finsop_1 X0 (k3_finseq_4 X0 X1 X2 X3) X4 = k5_binop_1 \\ & X0 X4 (k5_binop_1 X0 X4 X1 X2) X3)))))) \end{aligned}$$