

l8_finsop_1

(TMZaivqF5oNAAMDJPMxSbcRgo4EoupFJtLg)

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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 $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_setwiseo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 \\ X1))) \Rightarrow ((X1 = k9_finseq_1 X0) \Leftrightarrow ((k3_finseq_1 X1 = np_1) \wedge (k10_xtuple_0 \\ X1 = k1_tarski X0))) \end{aligned} \quad (2)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (3)$$

Assume the following.

$$r1_xxreal_0 np_1 np_1 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.k9_finseq_1 X0 = k5_finseq_1 X0 \quad (6)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow (k12_finseq_1 X0 X1 = k5_finseq_1 X1) \quad (8)$$

Assume the following.

$$\forall X0.v1_finseq_1 (k5_finseq_1 X0) \quad (9)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k5_finseq_1 X0)\wedge(v1_funct_1 (k5_finseq_1 X0))) \quad (10)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_finseq_1 \\ &X1 X0)\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 (k2_zfmisc_1 X0 X0) X0)\wedge \\ &(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) \\ &X0))))))\Rightarrow(m1_subset_1 (k1_finsop_1 X0 X1 X2) X0) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow (m2_finseq_1 (k12_finseq_1 X0 X1) X0) \quad (12)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v1_funct_1 X1))\Rightarrow((X1 = \\ &k9_finseq_1 X0)\Leftrightarrow((k9_xtuple_0 X1 = k2_finseq_1 np_1)\wedge(k1_funct_1 \\ &X1 np_1 = X0))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} &\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 X0)\Rightarrow \\ &(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 (k2_zfmisc_1 X0 \\ &X0) X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ &X0 X0) X0))))\Rightarrow(((v1_setwiseo X2 X0)\vee(r1_xxreal_0 np_1 (k3_finseq_1 \\ &X1)))\Rightarrow(\forall X3.(m1_subset_1 X3 X0)\Rightarrow(((v1_setwiseo X2 X0)\wedge \\ &(k3_finseq_1 X1 = k6_numbers))\Rightarrow((X3 = k1_finsop_1 X0 X1 X2)\Leftrightarrow(X3 = \\ &k4_binop_1 X0 X2)))\wedge((\neg(v1_setwiseo X2 X0)\wedge(k3_finseq_1 X1 = k6_numbers))\Rightarrow \\ &((X3 = k1_finsop_1 X0 X1 X2)\Leftrightarrow(\exists X4.((v1_funct_1 X4)\wedge((v1_funct_2 \\ &X4 k5_numbers X0)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ &X0))))\wedge((k8_nat_1 X0 X4 np_1 = k1_funct_1 X1 np_1)\wedge((\forall X5. \\ &(m1_subset_1 X5 k5_numbers)\Rightarrow(\neg(k6_numbers\neq X5)\wedge((\neg r1_xxreal_0 \\ &(k3_finseq_1 X1) X5)\wedge(k8_nat_1 X0 X4 (k2_nat_1 X5 np_1)\neq k1_binop_1 \\ &X2 (k8_nat_1 X0 X4 X5) (k1_funct_1 X1 (k2_nat_1 X5 np_1))))))\wedge(\\ &X3 = k8_nat_1 X0 X4 (k3_finseq_1 X1)))))))))) \end{aligned} \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 \\ & X0) X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0) X0)))))) \Rightarrow (k1_finsop_1 X0 (k12_finseq_1 X0 X1) X2 = X1))) \end{aligned}$$