

t75_finseq_6 (TMLVcuMn- WyP1sNRh3TJMGkYCirqgfUrfTYH)

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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 $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_finseq_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k6_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2. (m2_finseq_1 X2 X0) \Rightarrow (\forall X3. (m2_finseq_1 X3 X0) \Rightarrow \\ & ((X1 \in k10_xtuple_0 X2) \Rightarrow (k1_finseq_5 X0 (k8_finseq_1 X0 X2 X3) X1 = \\ & k1_finseq_5 X0 X2 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1. (X1 \in k10_xtuple_0 X0) \Rightarrow (X0 = k7_finseq_1 (k7_finseq_1 \\ & (k5_finseq_4 X0 X1) (k9_finseq_1 X1)) (k6_finseq_4 X0 X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1. \forall X2. (\neg v1_xboole_0 X2) \Rightarrow (((X1 \in k10_xtuple_0 \\ & X0) \wedge (m2_finseq_1 X0 X2)) \Rightarrow (m2_finseq_1 (k6_finseq_4 X0 X1) X2))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2. \forall X3. (m2_finseq_1 X3 X2) \Rightarrow ((X1 \in k10_xtuple_0 \\ & X3) \Rightarrow (k7_finseq_1 (k5_finseq_4 X3 X1) (k12_finseq_1 X0 X1) = k17_finseq_1 \\ & X2 (k4_finseq_4 X3 X1) X3)))) \end{aligned} \tag{4}$$

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.

$$\forall X0.\forall X1.\forall X2.((m1_finseq_1 X1 X0)\wedge(m1_finseq_1 X2 X0))\Rightarrow(k8_finseq_1 X0 X1 X2 = k7_finseq_1 X1 X2) \quad (7)$$

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.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(m1_finseq_1 X1 X0))\Rightarrow(m2_finseq_1 (k1_finseq_5 X0 X1 X2) X0) \quad (11)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 X0)\Rightarrow(\forall X2.k1_finseq_5 X0 X1 X2 = k17_finseq_1 X0 (k4_finseq_4 X1 X2) X1)) \quad (12)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 X0)\Rightarrow(\forall X3.(m2_finseq_1 X3 X0)\Rightarrow(((X1 \in k10_xtuple_0 X3)\wedge(X2 \in k10_xtuple_0 (k1_finseq_5 X0 X3 X1)))\Rightarrow(k1_finseq_5 X0 (k1_finseq_5 X0 X3 X1) X2 = k1_finseq_5 X0 X3 X2))))))$$