

t19_finseq_7 (TMdexoPVQNiZvMdDfM- mgn5mbQk2oJdRjLmc)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_finseq_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k3_funct_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k2_funct_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_finseq_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ 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. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m2_finseq_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 X0) \Rightarrow (\forall X3. (m1_subset_1 X3 X0) \Rightarrow \\ & (\forall X4. (m1_subset_1 X4 k5_numbers) \Rightarrow (k3_funct_7 X0 X1 X4 (\\ & \quad k7_partfun1 X0 X1 X4) = X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_finseq_1 X1 \\ & X0) \wedge ((m1_subset_1 X2 k5_numbers) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_7 \\ & X0 X1 X2 X3 = k2_funct_7 X1 X2 X3) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & ((m1_finseq_1 X1 X0)\wedge((v7_ordinal1 X2)\wedge(m1_subset_1 X3 X0))))\Rightarrow \\ & (k1_finseq_7 X0 X1 X2 X3 = k2_funct_7 X1 X2 X3) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(\\ & (v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_relat_1 X1)\wedge((v5_relat_1 \\ & X1 X0)\wedge(v1_funct_1 X1)))\Rightarrow(m1_subset_1 (k7_partfun1 X0 X1 X2) X0) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 X0)\Rightarrow \\ & (\forall X2.(v7_ordinal1 X2)\Rightarrow(\forall X3.(v7_ordinal1 X3)\Rightarrow(\\ & (((r1_xxreal_0 np_1 X2)\wedge((r1_xxreal_0 X2 (k3_finseq_1 X1))\wedge \\ & (r1_xxreal_0 np_1 X3)\wedge(r1_xxreal_0 X3 (k3_finseq_1 X1))))))\Rightarrow \\ & (k2_finseq_7 X0 X1 X2 X3 = k1_finseq_7 X0 (k1_finseq_7 X0 X1 X2 (k7_partfun1 \\ & X0 X1 X3)) X3 (k7_partfun1 X0 X1 X2)))\wedge((\neg(r1_xxreal_0 np_1 X2)\wedge \\ & ((r1_xxreal_0 X2 (k3_finseq_1 X1))\wedge((r1_xxreal_0 np_1 X3)\wedge(\\ & r1_xxreal_0 X3 (k3_finseq_1 X1))))))\Rightarrow(k2_finseq_7 X0 X1 X2 X3 = X1)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Leftrightarrow(X0 \in k4_ordinal1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(v5_relat_1 X1 X0) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 X0)\Rightarrow \\ & (\forall X2.(v7_ordinal1 X2)\Rightarrow(k2_finseq_7 X0 X1 X2 X2 = X1))) \end{aligned}$$