

t10_finseq_7
(TMP5YtXwVmw8C4PY34B6nENHKaJLfgjrnsC)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_funct_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (\forall X1. \forall X2. (v7_ordinal1 X2) \Rightarrow (k3_finseq_1 (k2_funct_7 \\ X0 X2 X1) = k3_finseq_1 X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ \forall X3. (X2 \neq X3) \Rightarrow (k1_funct_1 (k2_funct_7 X0 X2 X1) X3 = k1_funct_1 \\ X0 X3)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. \forall X2. (m2_finseq_1 \\ X2 X1) \Rightarrow (((r1_xxreal_0 np_1 X0) \wedge (r1_xxreal_0 X0 (k3_finseq_1 \\ X2))) \Rightarrow (k7_partfun1 X1 X2 X0 = k1_funct_1 X2 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ ((m1_finseq_1 X1 X0) \wedge ((v7_ordinal1 X2) \wedge (m1_subset_1 X3 X0)))) \Rightarrow \\ (k1_finseq_7 X0 X1 X2 X3 = k2_funct_7 X1 X2 X3) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge((m1_finseq_1 X1 X0)\wedge((v7_ordinal1 X2)\wedge(m1_subset_1 X3 X0))))\Rightarrow(m2_finseq_1 (k1_finseq_7 X0 X1 X2 X3) X0) \quad (7)$$

Theorem 1

$$\begin{aligned} &\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 X0)\Rightarrow \\ &\quad (\forall X2.(m1_subset_1 X2 X0)\Rightarrow(\forall X3.(v7_ordinal1 X3)\Rightarrow \\ &\quad (\forall X4.(v7_ordinal1 X4)\Rightarrow(((r1_xxreal_0 np_1 X3)\wedge(r1_xxreal_0 \\ &\quad X3 (k3_finseq_1 X1))))\Rightarrow((X3 = X4)\vee(k7_partfun1 X0 (k1_finseq_7 \\ &\quad X0 X1 X4 X2) X3 = k7_partfun1 X0 X1 X3)))))) \end{aligned}$$