

t39_seqfunc (TM- Pxpdl1FBwXpR8viiuu8WqUSJeoy9B1DtkB)

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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 $k1_numbers : \iota$ 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 $k5_numbers : \iota$ be given. Let $k4_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xreal_0\ X3)))\Rightarrow(k26_valued_1\ X0\ X1\ X2\ X3 = k24_valued_1 \\ & X2\ X3) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1\ X2)\wedge \\ & ((v1_funct_2\ X2\ k5_numbers\ (k4_partfun1\ X0\ X1))\wedge(m1_subset_1 \\ & X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (k4_partfun1\ X0\ X1))))))\wedge \\ & (v7_ordinal1\ X3))\Rightarrow(k1_seqfunc\ X0\ X1\ X2\ X3 = k1_funct_1\ X2\ X3) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1\ X1)\wedge(v4_relat_1\ X1\ X0))\Rightarrow(\\ & k1_relset_1\ X0\ X1 = k9_xtuple_0\ X1) \end{aligned} \tag{6}$$

Assume the following.

$$(\neg v1_xboole_0\ k4_ordinal1)\wedge(v3_ordinal1\ k4_ordinal1) \tag{7}$$

Assume the following.

$$v3_membered\ k1_numbers \tag{8}$$

Assume the following.

$$\neg v1_xboole_0\ k1_numbers \tag{9}$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \tag{10}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0\ X0)\wedge(((v1_funct_1 \\ & X1)\wedge((v1_funct_2\ X1\ k5_numbers\ (k4_partfun1\ X0\ k1_numbers))\wedge \\ & (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (k4_partfun1 \\ & X0\ k1_numbers))))))\wedge(v1_xreal_0\ X2)))\Rightarrow((v1_funct_1\ (k2_seqfunc \\ & X0\ X1\ X2))\wedge((v1_funct_2\ (k2_seqfunc\ X0\ X1\ X2)\ k5_numbers\ (k4_partfun1 \\ & X0\ k1_numbers))\wedge(m1_subset_1\ (k2_seqfunc\ X0\ X1\ X2)\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ k5_numbers\ (k4_partfun1\ X0\ k1_numbers)))))) \end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xreal_0\ X3)))\Rightarrow((v1_funct_1\ (k26_valued_1\ X0\ X1 \\ & X2\ X3))\wedge(m1_subset_1\ (k26_valued_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k1_numbers)))) \end{aligned} \tag{12}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2)\wedge \\ & ((v1_funct_2 X2 k5_numbers (k4_partfun1 X0 X1))\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 X1))))))\wedge \\ & (v7_ordinal1 X3)\Rightarrow((v1_funct_1 (k1_seqfunc X0 X1 X2 X3))\wedge(m1_subset_1 \\ & (k1_seqfunc X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 \\ & X2 k5_numbers (k4_partfun1 X0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 X1))))))\Rightarrow(\forall X3. \\ & (r1_seqfunc X0 X1 X2 X3)\Leftrightarrow((X3\neq k1_xboole_0)\wedge(\forall X4.(m2_subset_1 \\ & X4 k1_numbers k5_numbers)\Rightarrow(r1_tarski X3 (k1_relset_1 X0 (k1_seqfunc \\ & X0 X1 X2 X4)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_valued_0 X0)))\Rightarrow \\ & (\forall X1.(v1_xcmplx_0 X1)\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge(\\ & v1_funct_1 X2))\Rightarrow((X2 = k24_valued_1 X0 X1)\Leftrightarrow((k9_xtuple_0 X2 = k9_xtuple_0 \\ & X0)\wedge(\forall X3.(X3 \in k9_xtuple_0 X2)\Rightarrow(k1_funct_1 X2 X3 = k3_xcmplx_0 \\ & X1 (k1_funct_1 X0 X3)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge(\\ & (v1_funct_2 X1 k5_numbers (k4_partfun1 X0 k1_numbers))\wedge(m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers))))))\Rightarrow \\ & (\forall X2.(v1_xreal_0 X2)\Rightarrow(\forall X3.((v1_funct_1 X3)\wedge((\\ & v1_funct_2 X3 k5_numbers (k4_partfun1 X0 k1_numbers))\wedge(m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (k4_partfun1 X0 k1_numbers))))))\Rightarrow \\ & ((X3 = k2_seqfunc X0 X1 X2)\Leftrightarrow(\forall X4.(v7_ordinal1 X4)\Rightarrow(r2_relset_1 \\ & X0 k1_numbers (k1_seqfunc X0 k1_numbers X3 X4) (k26_valued_1 X0 \\ & k1_numbers (k1_seqfunc X0 k1_numbers X1 X4) X2)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(v1_membered X0) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (20)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.(v1_membered X1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_valued_0 X2)) \quad (23)$$

Theorem 1

$$\begin{aligned} &\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 k1_numbers)\Rightarrow \\ &(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 k5_numbers (k4_partfun1 \\ &X0 k1_numbers))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ &(k4_partfun1 X0 k1_numbers))))))\Rightarrow(\forall X3.(r1_seqfunc X0 \\ &k1_numbers X2 X3)\Rightarrow(r1_seqfunc X0 k1_numbers (k2_seqfunc X0 X2 X1) \\ &X3)))) \end{aligned}$$