

t11_seqfunc
(TMNgTBTJyxsPpd7zYJjtPxSQ8MLJgTgfzzT)

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Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $k4_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_seqfunc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow (k24_valued_1 X0 np_1 = X0) \quad (1)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v3_membered X1) \wedge (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \wedge (v1_xreal_0 X3))) \Rightarrow (k26_valued_1 X0 X1 X2 X3 = k24_valued_1 X2 X3) \quad (4)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1\ X2)\wedge \\ & ((v1_funct_2\ X2\ k5_numbers\ (k4_partfun1\ X0\ X1))\wedge(m1_subset_1 \\ & X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (k4_partfun1\ X0\ X1))))))\wedge \\ & (v7_ordinal1\ X3))\Rightarrow((v1_funct_1\ (k1_seqfunc\ X0\ X1\ X2\ X3))\wedge(m1_subset_1 \\ & (k1_seqfunc\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(\forall X1.((v1_funct_1\ X1)\wedge(\\ & (v1_funct_2\ X1\ k5_numbers\ (k4_partfun1\ X0\ k1_numbers))\wedge(m1_subset_1 \\ & X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (k4_partfun1\ X0\ k1_numbers))))))\Rightarrow \\ & (\forall X2.(v1_xreal_0\ X2)\Rightarrow(\forall X3.((v1_funct_1\ X3)\wedge(\\ & v1_funct_2\ X3\ k5_numbers\ (k4_partfun1\ X0\ k1_numbers))\wedge(m1_subset_1 \\ & X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (k4_partfun1\ X0\ k1_numbers))))))\Rightarrow \\ & ((X3 = k2_seqfunc\ X0\ X1\ X2)\Leftrightarrow(\forall X4.(v7_ordinal1\ X4)\Rightarrow(r2_relset_1 \\ & X0\ k1_numbers\ (k1_seqfunc\ X0\ k1_numbers\ X3\ X4)\ (k26_valued_1\ X0 \\ & k1_numbers\ (k1_seqfunc\ X0\ k1_numbers\ X1\ X4)\ X2)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge(v3_valued_0\ X0))\Rightarrow((v1_relat_1\ X0)\wedge(v1_valued_0\ X0)) \quad (8)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge(v5_relat_1\ X0\ k1_numbers))\Rightarrow((v1_relat_1\ X0)\wedge(v3_valued_0\ X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(v1_xreal_0\ X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(\forall X1.((v1_funct_1\ X1)\wedge(\\ & (v1_funct_2\ X1\ k5_numbers\ (k4_partfun1\ X0\ k1_numbers))\wedge(m1_subset_1 \\ & X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (k4_partfun1\ X0\ k1_numbers))))))\Rightarrow \\ & (r2_relset_1\ k5_numbers\ (k4_partfun1\ X0\ k1_numbers)\ (k2_seqfunc\ X0\ X1\ np_1)\ X1)) \end{aligned}$$