

t75_rfunct_3 (TMVQYoZD- fWw3JYceDEfVGdprePtgSMYgS9P)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ 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 $k1_numbers : \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k20_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r2_classes1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v8_valued_0 : \iota \Rightarrow o$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ 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.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.(k10_xtuple_0 X0 = k1_tarski X1) \Rightarrow (X0 = k2_funcop_1 (k9_xtuple_0 X0) X1)) \quad (1)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r2_classes1 X0 X1) \Rightarrow (k10_xtuple_0 X0 = k10_xtuple_0 X1))) \quad (2)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow (\forall X2.\forall X3.(v1_finset_1 X3) \Rightarrow ((X3 = k1_relset_1 X0 (k2_partfun1 X0 k1_numbers X1 X2)) \Rightarrow (k3_finseq_1 (k20_rfunct_3 X0 X1 X2) = k5_card_1 X3)))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k7_funcop_1 X0 X1 = k2_funcop_1 X0 X1 \quad (6)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((v7_ordinal1 X1)\wedge(m1_subset_1 X2 X0)))\Rightarrow(k5_finseq_2 X0 X1 X2 = k2_finseq_2 X1 X2) \quad (8)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v3_valued_0 X0))\Rightarrow(k1_rvsum_1 X0 = k10_xtuple_0 X0) \quad (9)$$

Assume the following.

$$\neg v1_finset_1 k4_ordinal1 \quad (10)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (11)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (14)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (15)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finseq_1\ X0)))\Rightarrow \\ (m2_subset_1\ (k3_finseq_1\ X0)\ k1_numbers\ k5_numbers) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1\ X2)\wedge \\ (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))\Rightarrow((v1_funct_1 \\ (k2_partfun1\ X0\ X1\ X2\ X3))\wedge(m1_subset_1\ (k2_partfun1\ X0\ X1\ X2\ X3) \\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0\ X0)\wedge((v1_funct_1 \\ X1)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers)))))\Rightarrow \\ ((v8_valued_0\ (k20_rfunct_3\ X0\ X1\ X2))\wedge(m2_finseq_1\ (k20_rfunct_3 \\ X0\ X1\ X2)\ k1_numbers)) \quad (18)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finseq_1\ X0)))\Rightarrow \\ (\forall X1.(m2_subset_1\ X1\ k1_numbers\ k5_numbers)\Rightarrow((X1 = k3_finseq_1 \\ X0)\Leftrightarrow(k2_finseq_1\ X1 = k9_xtuple_0\ X0))) \quad (19)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.k2_finseq_2\ X0\ X1 = k7_funcop_1 \\ (k2_finseq_1\ X0)\ X1) \quad (20)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(\forall X1.((v1_funct_1\ X1)\wedge \\ (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers))))\Rightarrow(\\ \forall X2.(v1_finset_1\ (k1_relset_1\ X0\ (k2_partfun1\ X0\ k1_numbers \\ X1\ X2)))\Rightarrow(\forall X3.((v8_valued_0\ X3)\wedge(m2_finseq_1\ X3\ k1_numbers))\Rightarrow \\ ((X3 = k20_rfunct_3\ X0\ X1\ X2)\Leftrightarrow(r2_classes1\ (k2_partfun1\ X0\ k1_numbers \\ X1\ X2)\ X3)))))) \quad (21)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge(v5_relat_1\ X0\ k1_numbers))\Rightarrow((v1_relat_1 \\ X0)\wedge(v3_valued_0\ X0)) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (24)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v1_finset_1 X0) \quad (25)$$

Assume the following.

$$\forall X0.(v6_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v7_ordinal1 X1)) \quad (26)$$

Theorem 1

$$\begin{aligned} &\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge \\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers))))\Rightarrow(\\ & \forall X2.\forall X3.(m1_subset_1 X3 k1_numbers)\Rightarrow(\forall X4. \\ & (v1_finset_1 X4)\Rightarrow(((X4 = k1_relset_1 X0 (k2_partfun1 X0 k1_numbers \\ & X1 X2))\wedge(k1_rsum_1 (k2_partfun1 X0 k1_numbers X1 X2) = k1_tarski \\ & X3))\Rightarrow(k20_rfunct_3 X0 X1 X2 = k5_finseq_2 k1_numbers (k5_card_1 \\ & X4) X3)))))) \end{aligned}$$