

l47_ami_wstd
(TMa14PQSAEwhAXVcmxS7bTXBbxC9Pbo41iX)

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Let $v1_setfam_1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_ami_wstd : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_ami_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_compos_1 : \iota \Rightarrow \iota$ be given. Let $k6_ami_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_compos_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v5_ami_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_xreal_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v2_finseq_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $l1_compos_1 : \iota \Rightarrow o$ be given. Let $v1_compos_0 : \iota \Rightarrow o$ be given. Let $v2_compos_0 : \iota \Rightarrow o$ be given. Let $v3_compos_0 : \iota \Rightarrow o$ be given. Let $v5_compos_0 : \iota \Rightarrow o$ be given. Let $l1_memstr_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. k1_funct_1 (k16_funcop_1 X0 X1) X0 = X1 \quad (1)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (k1_card_1 X0 = k1_card_1 (k9_xtuple_0 X0)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge ((v2_ami_wstd X1 X0) \wedge \\ & (l1_extpro_1 X1 X0)))))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 \\ & X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 X1)) \wedge ((\neg v1_xboole_0 \\ & X2) \wedge ((v1_funct_1 X2) \wedge ((v1_finset_1 X2) \wedge (v5_ami_wstd X2 X0 X1)))))) \Rightarrow \\ & (k6_ami_wstd X0 X1 X2 = k1_ami_wstd X0 X1 (k7_nat_d (k5_card_1 X2) \\ & np_1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.k1_card_1 (k1_tarski X0) = np_1 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge ((v2_ami_wstd X1 X0) \wedge \\ & (l1_extpro_1 X1 X0)))))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_compos_1 \\ & X1)) \Rightarrow (v5_ami_wstd (k16_funcop_1 (k1_ami_wstd X0 X1 k6_numbers) \\ & X2) X0 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k1_xreal_0 X0 X0 = k6_numbers) \quad (6)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(k9_xtuple_0 (k2_funcop_1 X0 X1) = X0) \wedge (r1_tarski (k10_xtuple_0 (k2_funcop_1 X0 X1)) (k1_tarski X1)) \quad (8)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (k7_nat_d X0 X1 = k1_xreal_0 X0 X1) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.k7_funcop_1 X0 X1 = k2_funcop_1 X0 X1 \quad (12)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (13)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (14)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (16)$$

Assume the following.

$$\exists X0.(v1_relat_1 X0) \wedge ((v2_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((\neg v1_xboole_0 X0) \wedge ((v1_finset_1 X0) \wedge ((v1_finseq_1 X0) \wedge (v2_finseq_1 X0))))))) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k2_zfmisc_1 X0 X1) \quad (18)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (v4_relat_1 (k16_funcop_1 X1 X2) X0) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X2 X1)) \Rightarrow (v5_relat_1 (k2_funcop_1 X0 X2) X1) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.v1_finset_1 (k16_funcop_1 X0 X1) \quad (22)$$

Assume the following.

$$\neg v1_setfam_1 k1_numbers \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.\neg v1_xboole_0 (k16_funcop_1 X0 X1) \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 (k2_funcop_1 X0 X1))\wedge(v1_funct_1 (k2_funcop_1 X0 X1)) \quad (25)$$

Assume the following.

$$\forall X0.\forall X1.v4_relat_1 (k2_funcop_1 X0 X1) X0 \quad (26)$$

Assume the following.

$$\forall X0.(l1_compos_1 X0)\Rightarrow((v1_compos_0 (u1_compos_1 X0))\wedge((v2_compos_0 (u1_compos_1 X0))\wedge((v3_compos_0 (u1_compos_1 X0))\wedge(v5_compos_0 (u1_compos_1 X0)))))) \quad (27)$$

Assume the following.

$$\forall X0.\forall X1.(l1_extpro_1 X1 X0)\Rightarrow((l1_memstr_0 X1 X0)\wedge(l1_compos_1 X1)) \quad (28)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (29)$$

Assume the following.

$$\forall X0.(l1_compos_1 X0)\Rightarrow(m1_subset_1 (k2_compos_1 X0) (u1_compos_1 X0)) \quad (30)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_setfam_1 X0)\wedge(((\neg v2_struct_0 X1)\wedge((v2_memstr_0 X1 X0)\wedge((v3_memstr_0 X1 X0)\wedge(v2_ami_wstd X1 X0)\wedge(l1_extpro_1 X1 X0))))))\wedge(v7_ordinal1 X2))\Rightarrow(m2_subset_1 (k1_ami_wstd X0 X1 X2) k1_numbers k5_numbers) \quad (31)$$

Assume the following.

$$\forall X0.\forall X1.k16_funcop_1 X0 X1 = k7_funcop_1 (k1_tarski X0) X1 \quad (32)$$

Assume the following.

$$\forall X0.\forall X1.k2_funcop_1 X0 X1 = k2_zfmisc_1 X0 (k1_tarski X1) \quad (33)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (34)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0) \Rightarrow (\forall X1.((v1_relat_1\ X1) \wedge (v4_relat_1\ X1\ X0)) \Rightarrow ((v1_xboole_0\ X1) \wedge ((v1_relat_1\ X1) \wedge (v4_relat_1\ X1\ X0)))) \quad (35)$$

Assume the following.

$$\forall X0.(v5_compos_0\ X0) \Rightarrow (\neg v1_xboole_0\ X0) \quad (36)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (v1_xreal_0\ X0) \quad (37)$$

Assume the following.

$$\forall X0.(\neg v1_setfam_1\ X0) \Rightarrow (\neg v1_xboole_0\ X0) \quad (38)$$

Assume the following.

$$\forall X0.(v6_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v7_ordinal1\ X1)) \quad (39)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_setfam_1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\ & ((v2_memstr_0\ X1\ X0) \wedge (v3_memstr_0\ X1\ X0) \wedge ((v3_extpro_1\ X1\ X0) \wedge \\ & ((v2_ami_wstd\ X1\ X0) \wedge (l1_extpro_1\ X1\ X0)))))) \Rightarrow ((k1_funct_1\ (\\ & k16_funcop_1\ (k1_ami_wstd\ X0\ X1\ k6_numbers)\ (k2_compos_1\ X1)) \\ & (k6_ami_wstd\ X0\ X1\ (k16_funcop_1\ (k1_ami_wstd\ X0\ X1\ k6_numbers) \\ & (k2_compos_1\ X1))) = k2_compos_1\ X1) \wedge (\forall X2.(m2_subset_1 \\ & X2\ k1_numbers\ k5_numbers) \Rightarrow (((k1_funct_1\ (k16_funcop_1\ (k1_ami_wstd \\ & X0\ X1\ k6_numbers)\ (k2_compos_1\ X1))\ X2 = k2_compos_1\ X1) \wedge (X2 \in k1_relset_1 \\ & (k1_tarski\ (k1_ami_wstd\ X0\ X1\ k6_numbers))\ (k16_funcop_1\ (k1_ami_wstd \\ & X0\ X1\ k6_numbers)\ (k2_compos_1\ X1)))) \Rightarrow (X2 = k6_ami_wstd\ X0\ X1\ (k16_funcop_1 \\ & (k1_ami_wstd\ X0\ X1\ k6_numbers)\ (k2_compos_1\ X1)))))) \end{aligned}$$