

t31_ami_wstd
(TMYZt5rTJdFywa7jSTnYeim272YxSwdPJYG)

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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 $v2_ami_wstd : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ 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 $v1_funct_1 : \iota \Rightarrow o$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_ami_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_ami_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((k9_xtuple_0 X0 = k9_xtuple_0 X1) \wedge (r1_tarski X0 X1)) \Rightarrow (X0 = X1))) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_setfam_1 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge \\ & ((v2_memstr_0 X1 X0) \wedge (v3_memstr_0 X1 X0) \wedge (v2_ami_wstd X1 X0) \wedge \\ & (l1_extpro_1 X1 X0)))) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge (v4_relat_1 \\ & X2 k5_numbers) \wedge (v5_relat_1 X2 (u1_compos_1 X1)) \wedge (\neg v1_xboole_0 \\ & X2) \wedge (v1_funct_1 X2) \wedge (v1_finset_1 X2)))) \Rightarrow (\forall X3. (m2_subset_1 \\ & X3 k1_numbers k5_numbers) \Rightarrow ((X3 \in k1_relset_1 k5_numbers X2) \Rightarrow (\\ & r1_ami_wstd X0 X1 X3 (k6_ami_wstd X0 X1 X2)))) \quad (3) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_tarski X0 X1) \Leftrightarrow ((r1_tarski \\ (k9_xtuple_0 X0) (k9_xtuple_0 X1)) \wedge (\forall X2.(X2 \in k9_xtuple_0 \\ X0) \Rightarrow (k1_funct_1 X0 X2 = k1_funct_1 X1 X2)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge ((v2_ami_wstd X1 X0) \wedge \\ (l1_extpro_1 X1 X0)))))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v4_relat_1 \\ X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 X1)) \wedge ((\neg v1_xboole_0 \\ X2) \wedge ((v1_funct_1 X2) \wedge (v1_finset_1 X2))))))) \Rightarrow (k6_ami_wstd X0 \\ X1 X2 \in k1_relset_1 k5_numbers X2))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (6)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (\\ k1_relset_1 X0 X1 = k9_xtuple_0 X1) \end{aligned} \quad (8)$$

Assume the following.

$$\neg v1_finset_1 k4_ordinal1 \quad (9)$$

Assume the following.

$$\neg v1_setfam_1 k1_numbers \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_setfam_1 X0) \wedge (((\neg v2_struct_0 \\ X1) \wedge ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge ((v2_ami_wstd \\ X1 X0) \wedge (l1_extpro_1 X1 X0)))))) \wedge ((v1_relat_1 X2) \wedge ((v4_relat_1 \\ X2 k5_numbers) \wedge ((v5_relat_1 X2 (u1_compos_1 X1)) \wedge ((\neg v1_xboole_0 \\ X2) \wedge ((v1_funct_1 X2) \wedge (v1_finset_1 X2)))))))) \Rightarrow (m2_subset_1 \\ (k6_ami_wstd X0 X1 X2) k1_numbers k5_numbers) \end{aligned} \quad (11)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(m1_subset_1 (k1_relset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow(X2 \in X1)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1_tarski X0 X1)\wedge(r1_tarski X1 X0)) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_setfam_1 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge \\ ((v2_memstr_0 X1 X0)\wedge(v3_memstr_0 X1 X0)\wedge(l1_extpro_1 X1 X0)))\Rightarrow \\ (\forall X2.((v1_relat_1 X2)\wedge(v4_relat_1 X2 k5_numbers)\wedge(\\ v5_relat_1 X2 (u1_compos_1 X1))\wedge(v1_funct_1 X2)\wedge(v1_finset_1 \\ X2))))\Rightarrow((v5_ami_wstd X2 X0 X1)\Leftrightarrow(\forall X3.(m2_subset_1 X3 k1_numbers \\ k5_numbers)\Rightarrow((X3 \in k1_relset_1 k5_numbers X2)\Rightarrow(\forall X4.(m2_subset_1 \\ X4 k1_numbers k5_numbers)\Rightarrow((r1_ami_wstd X0 X1 X4 X3)\Rightarrow(X4 \in k1_relset_1 \\ k5_numbers X2)))))) \quad (16) \end{aligned}$$

Assume the following.

$$\forall X0.(\neg v1_setfam_1 X0)\Rightarrow(\neg v1_xboole_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v1_finset_1 X0) \quad (18)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_setfam_1 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge \\ ((v2_memstr_0 X1 X0)\wedge(v3_memstr_0 X1 X0)\wedge(v2_ami_wstd X1 X0)\wedge \\ (l1_extpro_1 X1 X0))))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge(v4_relat_1 \\ X2 k5_numbers)\wedge(v5_relat_1 X2 (u1_compos_1 X1))\wedge((\neg v1_xboole_0 \\ X2)\wedge(v1_funct_1 X2)\wedge(v1_finset_1 X2)\wedge(v5_ami_wstd X2 X0 X1))))\Rightarrow \\ (\forall X3.((v1_relat_1 X3)\wedge(v4_relat_1 X3 k5_numbers)\wedge(\\ v5_relat_1 X3 (u1_compos_1 X1))\wedge((\neg v1_xboole_0 X3)\wedge(v1_funct_1 \\ X3)\wedge(v1_finset_1 X3))))\Rightarrow(((r1_tarski X2 X3)\wedge(k6_ami_wstd \\ X0 X1 X2 = k6_ami_wstd X0 X1 X3))\Rightarrow(X2 = X3)))) \end{aligned}$$