

t13_ami_wstd (TMLxqaW-
PVGti1QiWA6Z7JsgawCVUR4CXW2m)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. 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 $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_ami_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ami_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k2_ami_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $k1_ami_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_setfam_1 X0) \wedge (((\neg v2_struct_0 \\ & X1) \wedge ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge ((v2_ami_wstd \\ & X1 X0) \wedge (l1_extpro_1 X1 X0)))))) \wedge (v7_ordinal1 X2))) \Rightarrow (k3_ami_wstd \\ & X0 X1 X2 = k2_ami_wstd X0 X1 X2) \end{aligned} \quad (3)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (4)$$

Assume the following.

$$\neg v1_setfam_1 k4_ordinal1 \quad (5)$$

Assume the following.

$$\neg v1_setfam_1 k1_numbers \quad (6)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_setfam_1 \ X0) \wedge (((\neg v2_struct_0 \\ X1) \wedge ((v2_memstr_0 \ X1 \ X0) \wedge ((v3_memstr_0 \ X1 \ X0) \wedge ((v2_ami_wstd \\ X1 \ X0) \wedge (l1_extpro_1 \ X1 \ X0)))))) \wedge (v7_ordinal1 \ X2))) \Rightarrow (m2_subset_1 \\ (k3_ami_wstd \ X0 \ X1 \ X2) \ k1_numbers \ k5_numbers) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \ X0 \ k5_numbers) \wedge (v7_ordinal1 \ X1)) \Rightarrow (m2_subset_1 \ (k2_nat_1 \ X0 \ X1) \ k1_numbers \ k5_numbers) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_setfam_1 \ X0) \wedge (((\neg v2_struct_0 \\ X1) \wedge ((v2_memstr_0 \ X1 \ X0) \wedge ((v3_memstr_0 \ X1 \ X0) \wedge ((v2_ami_wstd \\ X1 \ X0) \wedge (l1_extpro_1 \ X1 \ X0)))))) \wedge (v7_ordinal1 \ X2))) \Rightarrow (m2_subset_1 \\ (k1_ami_wstd \ X0 \ X1 \ X2) \ k1_numbers \ k5_numbers) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_setfam_1 \ X0) \Rightarrow (\forall X1.((\neg v2_struct_0 \ X1) \wedge \\ ((v2_memstr_0 \ X1 \ X0) \wedge ((v3_memstr_0 \ X1 \ X0) \wedge ((v2_ami_wstd \ X1 \ X0) \wedge \\ (l1_extpro_1 \ X1 \ X0)))))) \Rightarrow (\forall X2.(m2_subset_1 \ X2 \ k1_numbers \\ k5_numbers) \Rightarrow (\forall X3.(v7_ordinal1 \ X3) \Rightarrow (k4_ami_wstd \ X0 \ X1 \\ X2 \ X3 = k1_ami_wstd \ X0 \ X1 \ (k2_nat_1 \ (k3_ami_wstd \ X0 \ X1 \ X2) \ X3)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_setfam_1 \ X0) \Rightarrow (\forall X1.((\neg v2_struct_0 \ X1) \wedge \\ ((v2_memstr_0 \ X1 \ X0) \wedge ((v3_memstr_0 \ X1 \ X0) \wedge ((v2_ami_wstd \ X1 \ X0) \wedge \\ (l1_extpro_1 \ X1 \ X0)))))) \Rightarrow (\forall X2.(v7_ordinal1 \ X2) \Rightarrow (\forall X3. \\ (v7_ordinal1 \ X3) \Rightarrow ((X3 = k2_ami_wstd \ X0 \ X1 \ X2) \Leftrightarrow (k1_ami_wstd \ X0 \ X1 \\ X3 = X2)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(\neg v1_setfam_1 \ X0) \Rightarrow (\neg v1_xboole_0 \ X0) \quad (13)$$

Assume the following.

$$\forall X0.(v6_membered \ X0) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ X0) \Rightarrow (v7_ordinal1 \ X1)) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(\neg v1_setfam_1\ X1) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0\ X2) \wedge ((v2_memstr_0\ X2\ X1) \wedge ((v3_memstr_0 \\ & X2\ X1) \wedge ((v2_ami_wstd\ X2\ X1) \wedge (l1_extpro_1\ X2\ X1)))))) \Rightarrow (\forall X3. \\ & (m2_subset_1\ X3\ k1_numbers\ k5_numbers) \Rightarrow (k2_nat_1\ (k3_ami_wstd \\ & X1\ X2\ X3)\ X0 = k3_ami_wstd\ X1\ X2\ (k4_ami_wstd\ X1\ X2\ X3\ X0)))) \end{aligned}$$