

t1_amistd_3 (TM-
FXq1hTYZMVcNu8PR2vVW4Kk9e7sUgDh3m)

October 27, 2020

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 $v3_amistd_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_extpro_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_amistd_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k3_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_wellord2 : \iota \Rightarrow \iota$ be given. Let $k2_wellord2 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$np_1 = k1_tarski\ k1_xboole_0 \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X0\ (k1_zfmisc_1\ X1)) \Leftrightarrow (r1_tarski\ X0\ X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(v3_ordinal1\ X1) \Rightarrow ((r1_tarski\ (k1_tarski\ X0)\ X1) \Rightarrow (k3_wellord1\ (k1_wellord2\ (k2_wellord2\ (k1_wellord2\ (k1_tarski\ X0))))\ (k1_wellord2\ (k1_tarski\ X0)) = k16_funcop_1\ k6_numbers\ X0)) \quad (3)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((k9_xtuple_0 X0 = k9_xtuple_0 \\ X1) \wedge (\forall X2.(X2 \in k9_xtuple_0 X0) \Rightarrow (k1_funct_1 X0 X2 = k1_funct_1 \\ X1 X2))) \Rightarrow (X0 = X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (k9_xtuple_0 (k2_funcop_1 X0 X1) = X0) \wedge (\\ r1_tarski (k10_xtuple_0 (k2_funcop_1 X0 X1)) (k1_tarski X1)) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. k7_funcop_1 X0 X1 = k2_funcop_1 X0 X1 \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 (k2_funcop_1 X0 X1)) \wedge (v1_funct_1 \\ (k2_funcop_1 X0 X1)) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. (v1_funct_1 (k7_funcop_1 X0 X1)) \wedge ((v1_funct_2 \\ (k7_funcop_1 X0 X1) X0 (k1_tarski X1)) \wedge (m1_subset_1 (k7_funcop_1 \\ X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 (k1_tarski X1)))))) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((\neg v1_setfam_1 X0) \wedge (((\neg v2_struct_0 \\ X1) \wedge ((v2_memstr_0 X1 X0) \wedge (v3_memstr_0 X1 X0) \wedge ((v3_amistd_1 \\ X1 X0) \wedge (l1_extpro_1 X1 X0)))))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 k5_numbers))) \Rightarrow \\ ((v1_relat_1 (k1_amistd_3 X0 X1 X2)) \wedge ((v5_relat_1 (k1_amistd_3 \\ X0 X1 X2) k5_numbers) \wedge ((v5_ordinal1 (k1_amistd_3 X0 X1 X2)) \wedge (v1_funct_1 \\ (k1_amistd_3 X0 X1 X2)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.k16_funcop_1 X0 X1 = k7_funcop_1 (k1_tarski X0) X1 \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_setfam_1 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((v2_memstr_0 X1 X0) \wedge ((v3_memstr_0 X1 X0) \wedge ((v3_amistd_1 X1 X0) \wedge \\ & (l1_extpro_1 X1 X0)))))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & k5_numbers)) \Rightarrow (\forall X3.((v1_relat_1 X3) \wedge ((v5_relat_1 X3 k5_numbers) \wedge \\ & ((v5_ordinal1 X3) \wedge (v1_funct_1 X3)))) \Rightarrow ((X3 = k1_amistd_3 X0 X1 \\ & X2) \Leftrightarrow ((k9_xtuple_0 X3 = k1_card_1 X2) \wedge (\forall X4.(X4 \in k1_card_1 \\ & X2) \Rightarrow (k1_funct_1 X3 X4 = k1_funct_1 (k3_wellord1 (k1_wellord2 (\\ & k2_wellord2 (k1_wellord2 X2)) (k1_wellord2 X2)) X4)))))) \end{aligned} \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(\neg v1_setfam_1 X1) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge ((v2_memstr_0 X2 X1) \wedge ((v3_memstr_0 \\ & X2 X1) \wedge ((v3_amistd_1 X2 X1) \wedge (l1_extpro_1 X2 X1)))))) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k1_zfmisc_1 k5_numbers)) \Rightarrow ((X3 = k1_tarski X0) \Rightarrow \\ & (k1_amistd_3 X1 X2 X3 = k16_funcop_1 k6_numbers X0)))) \end{aligned}$$