

t4_scm_inst
(TMPJbEso4FGE4zqGfruYM5EV3V6Q65rxtXh)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_scm_inst : \iota$ be given. Let $k10_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $np_3 : \iota$ be given. Let $np_4 : \iota$ be given. Let $np_5 : \iota$ be given. Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k2_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_scm_inst : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_9 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k7_card_1 : \iota \Rightarrow \iota$ be given. Let $k6_card_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_scm_inst : \iota$ be given. Let $k3_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_6 : \iota$ be given. Let $k7_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_7 : \iota$ be given. Let $np_8 : \iota$ 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.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (\forall X1. (v7_ordinal1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (\neg r1_xxreal_0 X1 X0))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (3)$$

Assume the following.

$$((v2_xxreal_0 np_9) \wedge (m2_subset_1 np_9 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_9 k5_numbers) \wedge (m1_subset_1 np_9 k1_numbers)) \quad (4)$$

Assume the following.

$$\neg v1_xboole_0 np_9 \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \text{ np_5}) \wedge (m2_subset_1 \text{ np_5 } k1_numbers \text{ k5_numbers})) \wedge \\ & ((m1_subset_1 \text{ np_5 } k5_numbers) \wedge (m1_subset_1 \text{ np_5 } k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \text{ np_4}) \wedge (m2_subset_1 \text{ np_4 } k1_numbers \text{ k5_numbers})) \wedge \\ & ((m1_subset_1 \text{ np_4 } k5_numbers) \wedge (m1_subset_1 \text{ np_4 } k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \text{ np_3}) \wedge (m2_subset_1 \text{ np_3 } k1_numbers \text{ k5_numbers})) \wedge \\ & ((m1_subset_1 \text{ np_3 } k5_numbers) \wedge (m1_subset_1 \text{ np_3 } k1_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \text{ np_2}) \wedge (m2_subset_1 \text{ np_2 } k1_numbers \text{ k5_numbers})) \wedge \\ & ((m1_subset_1 \text{ np_2 } k5_numbers) \wedge (m1_subset_1 \text{ np_2 } k1_numbers)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \text{ np_1}) \wedge (m2_subset_1 \text{ np_1 } k1_numbers \text{ k5_numbers})) \wedge \\ & ((m1_subset_1 \text{ np_1 } k5_numbers) \wedge (m1_subset_1 \text{ np_1 } k1_numbers)) \end{aligned} \quad (10)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_9 } \text{ np_5} \quad (11)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_9 } \text{ np_4} \quad (12)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_9 } \text{ np_3} \quad (13)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_9 } \text{ np_2} \quad (14)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_9 } \text{ np_1} \quad (15)$$

Assume the following.

$$\forall X0. (v7_ordinal1 \text{ X0}) \Rightarrow (k7_card_1 \text{ X0} = k6_card_1 \text{ X0}) \quad (16)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (17)$$

Assume the following.

$$k1_scm_inst = k1_xboole_0 \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & ((\neg v1_xboole_0 X0) \wedge ((m1_subset_1 X1 X0) \wedge ((m1_subset_1 X2 X0) \wedge \\ & ((m1_subset_1 X3 X0) \wedge ((m1_subset_1 X4 X0) \wedge (m1_subset_1 X5 X0)))))) \Rightarrow \\ & (k10_domain_1 X0 X1 X2 X3 X4 X5 = k3_enumset1 X1 X2 X3 X4 X5) \end{aligned} \quad (19)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (20)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & ((\neg v1_xboole_0 X0) \wedge ((m1_subset_1 X1 X0) \wedge ((m1_subset_1 X2 X0) \wedge \\ & ((m1_subset_1 X3 X0) \wedge ((m1_subset_1 X4 X0) \wedge (m1_subset_1 X5 X0)))))) \Rightarrow \\ & (m1_subset_1 (k10_domain_1 X0 X1 X2 X3 X4 X5) (k1_zfmisc_1 X0)) \end{aligned} \quad (21)$$

Assume the following.

$$\forall X0. (v7_ordinal1 X0) \Rightarrow (k6_card_1 X0 = X0) \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \end{aligned} \quad (23)$$

Assume the following.

$$\begin{aligned} & k3_scm_inst = k2_xboole_0 (k2_xboole_0 (k2_xboole_0 (k1_tarski \\ & (k3_xtuple_0 k1_scm_inst k1_xboole_0 k1_xboole_0)) (ReplSep2 \\ & (toset (\lambda X0 : \iota. m1_subset_1 X0 (k7_card_1 np_9))) (\lambda X0 : \\ & \iota. toset (\lambda X1 : \iota. m1_subset_1 X1 k5_numbers)) (\lambda X0 : \iota. \\ & \lambda X1 : \iota. X0 = np_6) (\lambda X0 : \iota. \lambda X1 : \iota. k3_xtuple_0 X0 \\ & (k12_finseq_1 k5_numbers X1) k1_xboole_0))) (ReplSep3 (toset \\ & (\lambda X0 : \iota. m1_subset_1 X0 (k7_card_1 np_9))) (\lambda X0 : \iota. \\ & toset (\lambda X1 : \iota. m1_subset_1 X1 k5_numbers)) (\lambda X0 : \iota. \lambda X1 : \\ & \iota. toset (\lambda X2 : \iota. m1_subset_1 X2 k2_scm_inst)) (\lambda X0 : \\ & \iota. \lambda X1 : \iota. \lambda X2 : \iota. X0 \in k7_domain_1 k5_numbers np_7 \\ & np_8) (\lambda X0 : \iota. \lambda X1 : \iota. \lambda X2 : \iota. k3_xtuple_0 X0 (k12_finseq_1 \\ & k5_numbers X1) (k12_finseq_1 k2_scm_inst X2)))) (ReplSep3 (toset \\ & (\lambda X0 : \iota. m1_subset_1 X0 (k7_card_1 np_9))) (\lambda X0 : \iota. \\ & toset (\lambda X1 : \iota. m1_subset_1 X1 k2_scm_inst)) (\lambda X0 : \iota. \\ & \lambda X1 : \iota. toset (\lambda X2 : \iota. m1_subset_1 X2 k2_scm_inst)) (\\ & \lambda X0 : \iota. \lambda X1 : \iota. \lambda X2 : \iota. X0 \in k10_domain_1 k5_numbers \\ & np_1 np_2 np_3 np_4 np_5) (\lambda X0 : \iota. \lambda X1 : \iota. \lambda X2 : \\ & \iota. k3_xtuple_0 X0 k1_xboole_0 (k2_finseq_4 k2_scm_inst X1 X2))) \end{aligned} \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (25)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \quad (26)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 k2_scm_inst) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 k2_scm_inst) \Rightarrow ((X0 \in k10_domain_1 k5_numbers np_1 \\ & np_2 np_3 np_4 np_5) \Rightarrow (k3_xtuple_0 X0 k1_xboole_0 (k2_finseq_4 \\ & k2_scm_inst X1 X2) \in k3_scm_inst))) \end{aligned}$$