

t10_scm_inst
(TMQ4tUcMRhpRjFRrmD6WEpYzTwYV1bEwuQH)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_scm_inst : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_8 : \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_scm_inst : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k7_card_1 : \iota \Rightarrow \iota$ be given. Let $np_9 : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_6 : \iota$ be given. Let $k2_scm_inst : \iota$ be given. Let $k7_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_7 : \iota$ be given. Let $k2_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $np_0 : \iota$ be given. Let $v1_compos_0 : \iota \Rightarrow o$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume

the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k3_scm_inst) \Rightarrow (\neg(\neg(X0 \in k1_tarski (\\
& k3_xtuple_0 k1_scm_inst k1_xboole_0 k1_xboole_0)) \wedge (k4_xtuple_0 \\
& X0 = k6_numbers)) \wedge (\neg(X0 \in ReplSep2 (toset (\lambda X1 : \iota.m1_subset_1 \\
& X1 (k7_card_1 np_9))) (\lambda X1 : \iota.toset (\lambda X2 : \iota.m1_subset_1 \\
& X2 k5_numbers)) (\lambda X1 : \iota.\lambda X2 : \iota.X1 = np_6) (\lambda X1 : \iota. \\
& \lambda X2 : \iota.k3_xtuple_0 X1 (k12_finseq_1 k5_numbers X2) k1_xboole_0)) \wedge \\
& (k4_xtuple_0 X0 = np_6)) \wedge (\neg(X0 \in ReplSep3 (toset (\lambda X1 : \iota. \\
& m1_subset_1 X1 (k7_card_1 np_9))) (\lambda X1 : \iota.toset (\lambda X2 : \\
& \iota.m1_subset_1 X2 k5_numbers)) (\lambda X1 : \iota.\lambda X2 : \iota.toset \\
& (\lambda X3 : \iota.m1_subset_1 X3 k2_scm_inst)) (\lambda X1 : \iota.\lambda X2 : \\
& \iota.\lambda X3 : \iota.X1 \in k7_domain_1 k5_numbers np_7 np_8) (\lambda X1 : \\
& \iota.\lambda X2 : \iota.\lambda X3 : \iota.k3_xtuple_0 X1 (k12_finseq_1 k5_numbers \\
& X2) (k12_finseq_1 k2_scm_inst X3))) \wedge ((k4_xtuple_0 X0 = np_7) \vee \\
& (k4_xtuple_0 X0 = np_8)) \wedge (\neg(X0 \in ReplSep3 (toset (\lambda X1 : \iota. \\
& m1_subset_1 X1 (k7_card_1 np_9))) (\lambda X1 : \iota.toset (\lambda X2 : \\
& \iota.m1_subset_1 X2 k2_scm_inst)) (\lambda X1 : \iota.\lambda X2 : \iota.toset \\
& (\lambda X3 : \iota.m1_subset_1 X3 k2_scm_inst)) (\lambda X1 : \iota.\lambda X2 : \\
& \iota.\lambda X3 : \iota.X1 \in k10_domain_1 k5_numbers np_1 np_2 np_3 \\
& np_4 np_5) (\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.k3_xtuple_0 \\
& X1 k1_xboole_0 (k2_finseq_4 k2_scm_inst X2 X3))) \wedge (\neg(k4_xtuple_0 \\
& X0 \neq np_1) \wedge ((k4_xtuple_0 X0 \neq np_2) \wedge ((k4_xtuple_0 X0 \neq np_3) \wedge \\
& ((k4_xtuple_0 X0 \neq np_4) \wedge (k4_xtuple_0 X0 \neq np_5)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \tag{2}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_8) \wedge (m2_subset_1 np_8 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_8 k5_numbers) \wedge (m1_subset_1 np_8 k1_numbers))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_7) \wedge (m2_subset_1 np_7 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_7 k5_numbers) \wedge (m1_subset_1 np_7 k1_numbers))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0 np_6) \wedge (m2_subset_1 np_6 k1_numbers k5_numbers)) \wedge \\
& ((m1_subset_1 np_6 k5_numbers) \wedge (m1_subset_1 np_6 k1_numbers))
\end{aligned} \tag{5}$$

Assume the following.

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

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.

$$\begin{aligned} & (m2_subset_1 \text{ np_0 } k1_numbers \text{ k5_numbers}) \wedge ((m1_subset_1 \text{ np_0 } \\ & \text{ k5_numbers}) \wedge (m1_subset_1 \text{ np_0 } k1_numbers)) \end{aligned} \quad (11)$$

Assume the following.

$$v1_xboole_0 \text{ np_0} \quad (12)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_8 } \text{ np_7} \quad (13)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_8 } \text{ np_6} \quad (14)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_8 } \text{ np_5} \quad (15)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_8 } \text{ np_4} \quad (16)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_8 } \text{ np_3} \quad (17)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_8 } \text{ np_2} \quad (18)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_8 } \text{ np_1} \quad (19)$$

Assume the following.

$$\neg r1_xxreal_0 \text{ np_8 } \text{ np_0} \quad (20)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v1_xboole_0 X0)\wedge(v1_compos_0 X0))\wedge (m1_subset_1 X1 X0))\Rightarrow(k2_compos_0 X0 X1 = k4_xtuple_0 X1) \quad (22)$$

Assume the following.

$$(\neg v1_xboole_0 k3_scm_inst)\wedge(v1_compos_0 k3_scm_inst) \quad (23)$$

Assume the following.

$$\forall X0.k4_xtuple_0 X0 = k1_xtuple_0 (k1_xtuple_0 X0) \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (25)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (26)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (27)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k3_scm_inst)\Rightarrow(r1_xxreal_0 (k2_compos_0 k3_scm_inst X0) np_8)$$