

l21_scm_inst (TMQhceWx-
TKkRv4nU5B6y6vFCQYi1DJnVTkx)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_compos_0 : \iota \Rightarrow \iota$ be given. Let $k3_scm_inst : \iota$ be given. Let $k6_numbers : \iota$ 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 $np_6 : \iota$ be given. Let $np_7 : \iota$ 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 $k7_card_1 : \iota \Rightarrow \iota$ 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 $k2_scm_inst : \iota$ be given. Let $k7_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_compos_0 : \iota \Rightarrow o$ be given. Let $k2_compos_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_compos_0 : \iota \Rightarrow o$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ 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.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (k1_compos_0 X0)) \Rightarrow (\exists X2.(m1_subset_1 X2 \\
& X0) \wedge (k2_compos_0 X0 X2 = X1)))
\end{aligned} \tag{2}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(((\neg v1_xboole_0 X0) \wedge (v1_compos_0 X0)) \wedge \\
& (m1_subset_1 X1 X0)) \Rightarrow (k2_compos_0 X0 X1 = k4_xtuple_0 X1)
\end{aligned} \tag{4}$$

Assume the following.

$$(\neg v1_xboole_0 k3_scm_inst) \wedge (v2_compos_0 k3_scm_inst) \tag{5}$$

Assume the following.

$$(\neg v1_xboole_0 k3_scm_inst) \wedge (v1_compos_0 k3_scm_inst) \tag{6}$$

Assume the following.

$$\forall X0.k4_xtuple_0 X0 = k1_xtuple_0 (k1_xtuple_0 X0) \quad (7)$$

Assume the following.

$$k1_xboole_0 = the (\lambda X0 : \iota.v1_xboole_0 X0) \quad (8)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 (k1_compos_0 k3_scm_inst)) \Rightarrow (\neg(X0 \neq k6_numbers) \wedge ((X0 \neq np_1) \wedge ((X0 \neq np_2) \wedge ((X0 \neq np_3) \wedge ((X0 \neq np_4) \wedge ((X0 \neq np_5) \wedge ((X0 \neq np_6) \wedge ((X0 \neq np_7) \wedge (X0 \neq np_8))))))))))$$