

l3_scmpds.i (TM-
F0q8AwmXNK9Lf5nGJSN4QCgPN5Rv6K3S9)

October 27, 2020

Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_scmpds_i : \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_numbers : \iota$ be given. Let $np_14 : \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_scm_inst : \iota$ be given. Let $np_1 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k7_card_1 : \iota \Rightarrow \iota$ be given. Let $np_15 : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $np_3 : \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k7_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_9 : \iota$ be given. Let $np_10 : \iota$ be given. Let $np_11 : \iota$ be given. Let $np_12 : \iota$ be given. Let $np_13 : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. \\ (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (X1 = k1_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow \\ (X2 = X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& k1_scmpds_i = k2_xboole_0 (k2_xboole_0 (k2_xboole_0 (k2_xboole_0 \\
& \quad (k2_xboole_0 (k1_tarski (k3_xtuple_0 k6_numbers k1_xboole_0 \\
& \quad k1_xboole_0)) (ReplSep (toset (\lambda X0 : \iota.m1_subset_1 X0 k4_numbers)) \\
& \quad (\lambda X0 : \iota.True) (\lambda X0 : \iota.k3_xtuple_0 np_14 k1_xboole_0 \\
& \quad (k12_finseq_1 k4_numbers X0)))) (ReplSep (toset (\lambda X0 : \iota. \\
& \quad m1_subset_1 X0 k2_scm_inst)) (\lambda X0 : \iota.True) (\lambda X0 : \iota. \\
& \quad k3_xtuple_0 np_1 k1_xboole_0 (k12_finseq_1 k2_scm_inst X0)))) \\
& (ReplSep3 (toset (\lambda X0 : \iota.m2_subset_1 X0 k4_ordinal1 (k7_card_1 \\
& \quad np_15))) (\lambda X0 : \iota.toset (\lambda X1 : \iota.m1_subset_1 X1 k2_scm_inst)) \\
& \quad (\lambda X0 : \iota.\lambda X1 : \iota.toset (\lambda X2 : \iota.m1_subset_1 X2 k4_numbers)) \\
& \quad (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.X0 \in k2_tarski np_2 np_3) \\
& \quad (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.k3_xtuple_0 X0 k1_xboole_0 \\
& \quad (k10_finseq_1 X1 X2)))) (ReplSep4 (toset (\lambda X0 : \iota.m2_subset_1 \\
& \quad X0 k4_ordinal1 (k7_card_1 np_15))) (\lambda X0 : \iota.toset (\lambda X1 : \\
& \quad \iota.m1_subset_1 X1 k2_scm_inst)) (\lambda X0 : \iota.\lambda X1 : \iota.toset \\
& \quad (\lambda X2 : \iota.m1_subset_1 X2 k4_numbers)) (\lambda X0 : \iota.\lambda X1 : \\
& \quad \iota.\lambda X2 : \iota.toset (\lambda X3 : \iota.m1_subset_1 X3 k4_numbers)) \\
& \quad (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.X0 \in k3_enumset1 \\
& \quad np_4 np_5 np_6 np_7 np_8) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \\
& \quad \iota.\lambda X3 : \iota.k3_xtuple_0 X0 k1_xboole_0 (k11_finseq_1 X1 X2 \\
& \quad X3)))) (ReplSep5 (toset (\lambda X0 : \iota.m2_subset_1 X0 k4_ordinal1 \\
& \quad (k7_card_1 np_15))) (\lambda X0 : \iota.toset (\lambda X1 : \iota.m1_subset_1 \\
& \quad X1 k2_scm_inst)) (\lambda X0 : \iota.\lambda X1 : \iota.toset (\lambda X2 : \iota. \\
& \quad m1_subset_1 X2 k2_scm_inst)) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \\
& \quad \iota.toset (\lambda X3 : \iota.m1_subset_1 X3 k4_numbers)) (\lambda X0 : \iota. \\
& \quad \lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.toset (\lambda X4 : \iota.m1_subset_1 \\
& \quad X4 k4_numbers)) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \\
& \quad \iota.\lambda X4 : \iota.X0 \in k3_enumset1 np_9 np_10 np_11 np_12 np_13) \\
& \quad (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \iota.\lambda X4 : \iota. \\
& \quad k3_xtuple_0 X0 k1_xboole_0 (k7_finseq_4 X1 X2 X3 X4)))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \tag{4}$$

Theorem 1 $k3_xtuple_0 k6_numbers k1_xboole_0 k1_xboole_0 \in k1_scmpds_i$.