

t5_scmfsa.i (TMLkPpb-
VQYv869eCuDgJqPYQMjRH1MME6v3)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_scm_inst : \iota$ be given. Let $k1_scmfsa_i : \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_11 : \iota$ be given. Let $np_12 : \iota$ be given. Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_scmfsa_i : \iota$ 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 $np_13 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_scm_inst : \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_9 : \iota$ be given. Let $np_10 : \iota$ be given. Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (\neg r1_xxreal_0 X1 X0))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (2)$$

Assume the following.

$$((v2_xxreal_0 np_13) \wedge (m2_subset_1 np_13 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_13 k5_numbers) \wedge (m1_subset_1 np_13 k1_numbers)) \quad (3)$$

Assume the following.

$$\neg v1_xboole_0 np_13 \quad (4)$$

Assume the following.

$$((v2_xxreal_0 np_12) \wedge (m2_subset_1 np_12 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_12 k5_numbers) \wedge (m1_subset_1 np_12 k1_numbers)) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_11) \wedge (m2_subset_1 \ np_11 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_11 \ k5_numbers) \wedge (m1_subset_1 \ np_11 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\neg r1_xreal_0 \ np_13 \ np_12 \quad (7)$$

Assume the following.

$$\neg r1_xreal_0 \ np_13 \ np_11 \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge ((\neg v1_xboole_0 \ X1) \wedge \\ & (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & \quad X2 \ X0 \ X1) \Leftrightarrow (m1_subset_1 \ X2 \ X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. (v7_ordinal1 \ X0) \Rightarrow (k7_card_1 \ X0 = k6_card_1 \ X0) \quad (10)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (11)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (12)$$

Assume the following.

$$\forall X0. (v7_ordinal1 \ X0) \Rightarrow (m1_subset_1 \ (k7_card_1 \ X0) \ (k1_zfmisc_1 \ k4_ordinal1)) \quad (13)$$

Assume the following.

$$\forall X0. (v7_ordinal1 \ X0) \Rightarrow (k6_card_1 \ X0 = X0) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k2_xboole_0 \ X0 \ X1) \Leftrightarrow (\forall X3. \\ & \quad (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k2_tarSKI \ X0 \ X1) \Leftrightarrow (\forall X3. \\ & \quad (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned}
& k2_scmfsa_i = k2_xboole_0 (k2_xboole_0 k3_scm_inst (ReplSep4 \\
& (toset (\lambda X0 : \iota.m2_subset_1 X0 k4_ordinal1 (k7_card_1 np_13))) \\
& (\lambda X0 : \iota.toset (\lambda X1 : \iota.m1_subset_1 X1 k2_scm_inst)) \\
& (\lambda X0 : \iota.\lambda X1 : \iota.toset (\lambda X2 : \iota.m1_subset_1 X2 k2_scm_inst)) \\
& (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.toset (\lambda X3 : \iota.m1_subset_1 \\
& X3 k1_scmfsa_i)) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \iota.\lambda X3 : \\
& \iota.X0 \in k2_tarski np_9 np_10) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \\
& \iota.\lambda X3 : \iota.k3_xtuple_0 X0 k1_xboole_0 (k11_finseq_1 X1 X3 \\
& X2)))) (ReplSep3 (toset (\lambda X0 : \iota.m2_subset_1 X0 k4_ordinal1 \\
& (k7_card_1 np_13))) (\lambda X0 : \iota.toset (\lambda X1 : \iota.m1_subset_1 \\
& X1 k2_scm_inst)) (\lambda X0 : \iota.\lambda X1 : \iota.toset (\lambda X2 : \iota. \\
& m1_subset_1 X2 k1_scmfsa_i)) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \\
& \iota.X0 \in k2_tarski np_11 np_12) (\lambda X0 : \iota.\lambda X1 : \iota.\lambda X2 : \\
& \iota.k3_xtuple_0 X0 k1_xboole_0 (k10_finseq_1 X1 X2)))
\end{aligned} \tag{17}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \tag{18}$$

Theorem 1

$$\begin{aligned}
& \forall X0.\forall X1.(m1_subset_1 X1 k2_scm_inst) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 k1_scmfsa_i) \Rightarrow ((X0 \in k2_tarski np_11 np_12) \Rightarrow \\
& (k3_xtuple_0 X0 k1_xboole_0 (k10_finseq_1 X1 X2) \in k2_scmfsa_i)))
\end{aligned}$$