

t5_scmpds_i
(TMPbj6AKven8C2vjDFHJYdGK26y1TXpKKoZ)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_scmpds_i : \iota$ be given. Let $k2_scm_inst : \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k3_xtuple_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k2_scmpds_i : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_scmpds_i : \iota \Rightarrow \iota$ be given. Let $k6_scmpds_i : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_numbers : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ (\forall X2. (m1_subset_1 X2 X0) \Rightarrow ((k7_partfun1 X0 (k2_finseq_4 \\ X0 X1 X2) np_1 = X1) \wedge (k7_partfun1 X0 (k2_finseq_4 X0 X1 X2) np_2 = \\ X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 k2_scm_inst) \wedge (v1_int_1 X1)) \Rightarrow (k2_scmpds_i X0 X1 = k10_finseq_1 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(k2_finseq_4 X0 X1 X2 = k10_finseq_1 X1 X2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.k2_xtuple_0 (k3_xtuple_0 X0 X1 X2) = X2 \quad (7)$$

Assume the following.

$$\neg v1_xboole_0 k2_scm_inst \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(m2_finseq_1 (k2_finseq_4 X0 X1 X2) X0) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k1_scmpds_i)\Rightarrow((\exists X1.(m1_subset_1 X1 k2_scm_inst)\wedge(\exists X2.(v1_int_1 X2)\wedge(\exists X3.(m2_subset_1 X3 k4_ordinal1 (k7_card_1 np_15))\wedge(X0 = k3_xtuple_0 X3 k1_xboole_0 (k2_scmpds_i X1 X2))))))\Rightarrow(\forall X1.(v1_int_1 X1)\Rightarrow((X1 = k6_scmpds_i X0)\Leftrightarrow(\exists X2.(m2_finseq_1 X2 (k2_xboole_0 k2_scm_inst k4_numbers))\wedge((X2 = k2_xtuple_0 X0)\wedge(X1 = k7_partfun1 (k2_xboole_0 k2_scm_inst k4_numbers) X2 np_2)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k1_scmpds_i)\Rightarrow((\exists X1.(m1_subset_1 X1 k2_scm_inst)\wedge(\exists X2.(v1_int_1 X2)\wedge(\exists X3.(m2_subset_1 X3 k4_ordinal1 (k7_card_1 np_15))\wedge(X0 = k3_xtuple_0 X3 k1_xboole_0 (k2_scmpds_i X1 X2))))))\Rightarrow(\forall X1.(m1_subset_1 X1 k2_scm_inst)\Rightarrow((X1 = k5_scmpds_i X0)\Leftrightarrow(\exists X2.(m2_finseq_1 X2 (k2_xboole_0 k2_scm_inst k4_numbers))\wedge((X2 = k2_xtuple_0 X0)\wedge(X1 = k7_partfun1 (k2_xboole_0 k2_scm_inst k4_numbers) X2 np_1)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_xboole_0 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\vee(X3 \in X1))) \quad (12)$$

Assume the following.

$$\forall X0.(v1_int_1 X0)\Leftrightarrow(X0 \in k4_numbers) \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k4_ordinal1 (k7_card_1 np_15)) \Rightarrow (\\ & \quad \forall X1.(m1_subset_1 X1 k1_scmpds_i) \Rightarrow (\forall X2.(m1_subset_1 \\ & \quad X2 k2_scm_inst) \Rightarrow (\forall X3.(v1_int_1 X3) \Rightarrow ((X1 = k3_xtuple_0 \\ X0 k1_xboole_0 (k2_scmpds_i X2 X3)) \Rightarrow ((k5_scmpds_i X1 = X2) \wedge (k6_scmpds_i \\ X1 = X3)))))) \end{aligned}$$