

t6_fsm_2

(TMQS9duUkWjy4nFaq2CVto32tSKbLfxwrmK)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_fsm_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_fsm_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r3_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (\forall X1.(v1_finset_1 X1) \Rightarrow ((r3_xboole_0 X0 X1) \wedge (k5_card_1 X0 = k5_card_1 X1)) \Rightarrow (X0 = X1)) \quad (1)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (l1_fsm_1 X1 X0)) \Rightarrow ((v1_fsm_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_1 X2 X0) \Rightarrow (\forall X3.(m2_finseq_1 X3 X0) \Rightarrow ((k1_funct_1 X2 np_1 = k1_funct_1 X3 np_1) \Rightarrow (r3_xboole_0 (k2_fsm_1 X0 X1 (u2_fsm_1 X0 X1) X2) (k2_fsm_1 X0 X1 (u2_fsm_1 X0 X1) X3))))))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0.(v1_finset_1 X0) \Rightarrow (k5_card_1 X0 = k1_card_1 X0) \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k3_finseq_1 X0 = k1_card_1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(l1_fsm_1 X1 X0)\Rightarrow(m1_subset_1 (u2_fsm_1 X0 X1) (u1_struct_0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge(v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge(((\neg v2_struct_0 X1)\wedge(l1_fsm_1 X1 X0))\wedge((m1_subset_1 X2 (u1_struct_0 X1))\wedge(m1_finseq_1 X3 X0))))\Rightarrow(m2_finseq_1 (k2_fsm_1 X0 X1 X2 X3) (u1_struct_0 X1)) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge(l1_fsm_1 X1 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X1))\Rightarrow(\forall X3.(m2_finseq_1 X3 X0)\Rightarrow(\forall X4.(m2_finseq_1 X4 (u1_struct_0 X1))\Rightarrow((X4 = k2_fsm_1 X0 X1 X2 X3)\Leftrightarrow((k1_funct_1 X4 np_1 = X2)\wedge((k3_finseq_1 X4 = k2_nat_1 (k3_finseq_1 X3) np_1)\wedge(\forall X5.(v7_ordinal1 X5)\Rightarrow(\neg(r1_xxreal_0 np_1 X5)\wedge(r1_xxreal_0 X5 (k3_finseq_1 X3))\wedge(\forall X6.(m1_subset_1 X6 X0)\Rightarrow(\forall X7.(m1_subset_1 X7 (u1_struct_0 X1))\Rightarrow(\forall X8.(m1_subset_1 X8 (u1_struct_0 X1))\Rightarrow(\neg(X6 = k1_funct_1 X3 X5)\wedge((X7 = k1_funct_1 X4 X5)\wedge((X8 = k1_funct_1 X4 (k1_nat_1 X5 np_1))\wedge(k1_fsm_1 X0 X1 X6 X7 = X8)))))))))))))) \quad (10) \end{aligned}$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finset_1 X0))) \quad (11)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge(l1_fsm_1 X1 X0))\Rightarrow((v1_fsm_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_1 X2 X0)\Rightarrow(\forall X3.(m2_finseq_1 X3 X0)\Rightarrow(((k1_funct_1 X2 np_1 = k1_funct_1 X3 np_1)\wedge(k3_finseq_1 X2 = k3_finseq_1 X3))\Rightarrow(k2_fsm_1 X0 X1 (u2_fsm_1 X0 X1) X2 = k2_fsm_1 X0 X1 (u2_fsm_1 X0 X1) X3)))))) \quad (12)$$