

t24_fsm_1

(TMPS7noG5XLmPs4Ynpy3K1Uug3HMippwhEo)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l2_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r5_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r6_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$k5_numbers = k4_ordinal1 \tag{1}$$

Assume the following.

$$v6_membered\ k4_ordinal1 \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0\ X0) \Rightarrow (\forall X1.(\neg v1_xboole_0\ X1) \Rightarrow \\ & (\forall X2.((\neg v2_struct_0\ X2) \wedge (l2_fsm_1\ X2\ X0\ X1)) \Rightarrow (\forall X3. \\ & (m1_subset_1\ X3\ (u1_struct_0\ X2)) \Rightarrow (\forall X4.(m1_subset_1\ X4 \\ & (u1_struct_0\ X2)) \Rightarrow (\forall X5.(v7_ordinal1\ X5) \Rightarrow ((r6_fsm_1\ X0 \\ & X1\ X2\ X3\ X4\ X5) \Leftrightarrow (\forall X6.(m2_finseq_1\ X6\ X0) \Rightarrow ((r1_xreal_0\ (\\ & k3_finseq_1\ X6)\ X5) \Rightarrow (k4_fsm_1\ X0\ X1\ X2\ X3\ X6 = k4_fsm_1\ X0\ X1\ X2\ X4\ X6)))))))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0\ X0) \Rightarrow (\forall X1.(\neg v1_xboole_0\ X1) \Rightarrow \\ & (\forall X2.((\neg v2_struct_0\ X2) \wedge (l2_fsm_1\ X2\ X0\ X1)) \Rightarrow (\forall X3. \\ & (m1_subset_1\ X3\ (u1_struct_0\ X2)) \Rightarrow (\forall X4.(m1_subset_1\ X4 \\ & (u1_struct_0\ X2)) \Rightarrow ((r5_fsm_1\ X0\ X1\ X2\ X3\ X4) \Leftrightarrow (\forall X5.(m2_finseq_1 \\ & X5\ X0) \Rightarrow (k4_fsm_1\ X0\ X1\ X2\ X3\ X5 = k4_fsm_1\ X0\ X1\ X2\ X4\ X5)))))))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(v6_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v7_ordinal1\ X1)) \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(\neg v1_xboole_0 \\ & \quad X1) \Rightarrow (\forall X2.(\neg v1_xboole_0 X2) \Rightarrow (\forall X3.((\neg v2_struct_0 \\ & X3) \wedge (l2_fsm_1 X3 X1 X2)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\ & \quad X3)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X3)) \Rightarrow ((r5_fsm_1 \\ & \quad X1 X2 X3 X4 X5) \Rightarrow (r6_fsm_1 X1 X2 X3 X4 X5 X0))))))) \end{aligned}$$