

t22_fsm_1 (TMRbE-
troi58HN8qXUukz5GNHNnzRgTEkHWA)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r6_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k4_fsm_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2.((\neg v2_struct_0 X2) \wedge (l2_fsm_1 X2 X0 X1)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X2)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X2)) \Rightarrow (\forall X5.(v7_ordinal1 X5) \Rightarrow ((r6_fsm_1 X0 \\ & X1 X2 X3 X4 X5) \Leftrightarrow (\forall X6.(m2_finseq_1 X6 X0) \Rightarrow ((r1_xreal_0 (\\ & k3_finseq_1 X6) X5) \Rightarrow (k4_fsm_1 X0 X1 X2 X3 X6 = k4_fsm_1 X0 X1 X2 X4 X6)))))))))) \\ & (1) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2.((\neg v2_struct_0 X2) \wedge (l2_fsm_1 X2 X0 X1)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X2)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X2)) \Rightarrow (\forall X5.(v7_ordinal1 X5) \Rightarrow ((r6_fsm_1 X0 \\ & X1 X2 X3 X4 X5) \Rightarrow (r6_fsm_1 X0 X1 X2 X4 X3 X5)))))))) \end{aligned}$$