t48_fsm_1 (TM-cJjM6vmRSqSwQBAGQM26Dr3b3VgqgXVWU)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v8\_struct\_0 : \iota \Rightarrow o$ be given. Let $l2\_fsm\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12\_fsm\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6\_fsm\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_fsm\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_struct\_0\ X0)) \Rightarrow (\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow (\forall X2.(l2\_fsm\_1\ X2\ X0\ X1) \Rightarrow (l1\_fsm\_1\ X2\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(l1\_fsm\_1\ X1\ X0) \Rightarrow (l1\_struct\_0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \tag{5}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge (l2\_fsm\_1\ X2\ X0\ X1)) \Rightarrow (k12\_fsm\_1\ X0\ X1\ X2 = ReplSep\ (toset\ (\lambda X3 : \iota.m1\_subset\_1\ X3\ (u1\_struct\_0\ X2)))\ (\lambda X3 : \iota.v6\_fsm\_1\ X3\ X0\ X1\ X2)\ (\lambda X3 : \iota.X3)))) \tag{6}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v8\_struct\_0\ X2)\wedge(l2\_fsm\_1\ X2\ X1\ X0)))\Rightarrow((r1\_tarski\ (k12\_fsm\_1\ X1\ X0\ X2)\ (u1\_struct\_0\ X2))\wedge (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X2))\Rightarrow((X3 \in k12\_fsm\_1\ X1\ X0\ X2)\Leftrightarrow(v6\_fsm\_1\ X3\ X1\ X0\ X2))))))$$