

# t16\_fsm\_1 (TMEzECJPwstiTKNGapnxR- MQRav72kDFvEiJ)

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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  $r5\_fsm\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_fsm\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow \\
 & (\forall X2. ((\neg v2\_struct\_0 X2) \wedge (l2\_fsm\_1 X2 X0 X1)) \Rightarrow (\forall X3. \\
 & (m1\_subset\_1 X3 (u1\_struct\_0 X2)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\
 & (u1\_struct\_0 X2)) \Rightarrow ((r5\_fsm\_1 X0 X1 X2 X3 X4) \Leftrightarrow (\forall X5. (m2\_finseq\_1 \\
 & X5 X0) \Rightarrow (k4\_fsm\_1 X0 X1 X2 X3 X5 = k4\_fsm\_1 X0 X1 X2 X4 X5))))))))) \\
 & \tag{1}
 \end{aligned}$$

## Theorem 1

$$\begin{aligned}
 & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow \\
 & (\forall X2. ((\neg v2\_struct\_0 X2) \wedge (l2\_fsm\_1 X2 X0 X1)) \Rightarrow (\forall X3. \\
 & (m1\_subset\_1 X3 (u1\_struct\_0 X2)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\
 & (u1\_struct\_0 X2)) \Rightarrow (\forall X5. (m1\_subset\_1 X5 (u1\_struct\_0 X2)) \Rightarrow \\
 & (((r5\_fsm\_1 X0 X1 X2 X3 X4) \wedge (r5\_fsm\_1 X0 X1 X2 X4 X5)) \Rightarrow (r5\_fsm\_1 X0 \\
 & X1 X2 X3 X5)))))))))
 \end{aligned}$$