

# t15\_fsm\_3 (TMRTGuu- VfKeuahHrSq1WYfRgUxZXuduR6LM)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_fsm\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_fsm\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_fsm\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
& \quad (k8\_afinsq\_1 X0))) \Rightarrow (\forall X2. ((\neg v2\_struct\_0 X2) \wedge (l1\_fsm\_3 \\
& \quad X2 X0 X1)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& \quad X2))) \Rightarrow (k3\_fsm\_3 X0 X1 X2 X3 = ReplSep (toset (\lambda X4 : \iota. m1\_subset\_1 \\
& \quad X4 (k8\_afinsq\_1 X0))) (\lambda X4 : \iota. \neg r1\_xboole\_0 X3 (k3\_rewrite3 \\
& \quad X0 X1 X2 X4 (u1\_fsm\_3 X0 X1 X2))) (\lambda X4 : \iota. X4))))))
\end{aligned} \tag{1}$$

## Theorem 1

$$\begin{aligned}
& \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k8\_afinsq\_1 \\
& \quad X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k8\_afinsq\_1 X0))) \Rightarrow \\
& \quad (\forall X3. ((\neg v2\_struct\_0 X3) \wedge (l1\_fsm\_3 X3 X0 X2)) \Rightarrow (\forall X4. \\
& \quad (m1\_subset\_1 X4 (k1\_zfmisc\_1 (u1\_struct\_0 X3))) \Rightarrow ((X1 \in k3\_fsm\_3 \\
& \quad X0 X2 X3 X4) \Leftrightarrow (\neg r1\_xboole\_0 X4 (k3\_rewrite3 X0 X2 X3 X1 (u1\_fsm\_3 X0 \\
& \quad X2 X3))))))))))
\end{aligned}$$