

# l53\_lfuzzy\_1

(TMZu2aUvrmKiWhPoVETmUyZYC4RAvmH5Y3L)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_lfuzzy\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_lfuzzy\_0 : \iota \Rightarrow \iota$  be given. Let  $k12\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_lfuzzy\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_lfuzzy\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1 : \iota \Rightarrow \iota \Rightarrow \iota. \forall X2 : \iota \Rightarrow \iota \Rightarrow \iota. \forall X3 : \\
 & \quad \iota \Rightarrow o. \forall X4 : \iota \Rightarrow o. \forall X5. \forall X6. (\forall X7. \\
 & \quad (m1\_subset\_1 X7 X6) \Rightarrow (\forall X8. (m1\_subset\_1 X8 X5) \Rightarrow (((X4 X7) \wedge \\
 & (X3 X8)) \Rightarrow (X2 X7 X8 = X1 X7 X8)))) \Rightarrow (k1\_yellow\_0 X0 (ReplSep (toset \\
 & \quad (\lambda X7 : \iota. m1\_subset\_1 X7 X6)) (\lambda X7 : \iota. X4 X7) (\lambda X7 : \iota. \\
 & \quad k1\_yellow\_0 X0 (ReplSep (toset (\lambda X8 : \iota. m1\_subset\_1 X8 X5)) \\
 & (\lambda X8 : \iota. X3 X8) (\lambda X8 : \iota. X2 X7 X8)))) = k1\_yellow\_0 X0 (ReplSep \\
 & \quad (toset (\lambda X7 : \iota. m1\_subset\_1 X7 X5)) (\lambda X7 : \iota. X3 X7) (\lambda X7 : \\
 & \quad \iota. k1\_yellow\_0 X0 (ReplSep (toset (\lambda X8 : \iota. m1\_subset\_1 X8 \\
 & \quad X6)) (\lambda X8 : \iota. X4 X8) (\lambda X8 : \iota. X1 X8 X7))))))
 \end{aligned} \tag{1}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v5\_relat\_1 X1 (k1\_rcomp\_1 \\
& k6\_numbers np\_1)) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (k2\_zfmisc\_1 \\
& X0 X0) k1\_numbers) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& (k2\_zfmisc\_1 X0 X0) k1\_numbers)))))) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (u1\_struct\_0 (k4\_lfuzzy\_0 (k2\_zfmisc\_1 X0 X0)))))) \Rightarrow \\
& (\forall X3.(m1\_subset\_1 X3 X0) \Rightarrow (\forall X4.(m1\_subset\_1 X4 X0) \Rightarrow \\
& (k1\_yellow\_0 (k1\_lfuzzy\_0 (k1\_rcomp\_1 k6\_numbers np\_1)) (ReplSep \\
& (toset (\lambda X5 : \iota.m1\_subset\_1 X5 X0)) (\lambda X5 : \iota.True) (\lambda X5 : \\
& \iota.k1\_yellow\_0 (k1\_lfuzzy\_0 (k1\_rcomp\_1 k6\_numbers np\_1)) \\
& (ReplSep (toset (\lambda X6 : \iota.m1\_subset\_1 X6 (u1\_struct\_0 (k4\_lfuzzy\_0 \\
& (k2\_zfmisc\_1 X0 X0)))))) (\lambda X6 : \iota.X6 \in X2) (\lambda X6 : \iota.k12\_lattice3 \\
& (k1\_lfuzzy\_0 (k1\_rcomp\_1 k6\_numbers np\_1)) (k7\_lfuzzy\_0 (k2\_zfmisc\_1 \\
& X0 X0) X1 (k1\_domain\_1 X0 X0 X3 X5)) (k9\_lfuzzy\_0 (k2\_zfmisc\_1 X0 \\
& X0) X6 (k1\_domain\_1 X0 X0 X5 X4)))))) = k1\_yellow\_0 (k1\_lfuzzy\_0 \\
& (k1\_rcomp\_1 k6\_numbers np\_1)) (ReplSep (toset (\lambda X5 : \iota.m1\_subset\_1 \\
& X5 (u1\_struct\_0 (k4\_lfuzzy\_0 (k2\_zfmisc\_1 X0 X0)))))) (\lambda X5 : \\
& \iota.X5 \in X2) (\lambda X5 : \iota.k1\_yellow\_0 (k1\_lfuzzy\_0 (k1\_rcomp\_1 \\
& k6\_numbers np\_1)) (ReplSep (toset (\lambda X6 : \iota.m1\_subset\_1 X6 \\
& X0)) (\lambda X6 : \iota.True) (\lambda X6 : \iota.k12\_lattice3 (k1\_lfuzzy\_0 \\
& (k1\_rcomp\_1 k6\_numbers np\_1)) (k7\_lfuzzy\_0 (k2\_zfmisc\_1 X0 X0) \\
& X1 (k1\_domain\_1 X0 X0 X3 X6)) (k9\_lfuzzy\_0 (k2\_zfmisc\_1 X0 X0) X5 \\
& (k1\_domain\_1 X0 X0 X6 X4))))))))))
\end{aligned}$$