

# t38\_qc\_lang3 (TMdHzn- MUPXUC7G6DX3RPTmh93DmnsJEnzZB)

October 27, 2020

Let  $m1\_qc\_lang1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $v3\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_qc\_lang3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v2\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_qc\_lang3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k17\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k20\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k22\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_qc\_lang1 X0)))) \Rightarrow ((k4\_qc\_lang3 \\
& X0 X1 (k12\_qc\_lang1 X0) = k1\_xboole\_0) \wedge ((\forall X2.(m1\_subset\_1 \\
& X2 (k9\_qc\_lang1 X0)) \Rightarrow ((v2\_qc\_lang1 X2 X0) \Rightarrow (k4\_qc\_lang3 X0 X1 X2 = \\
& k1\_qc\_lang3 X0 (k17\_qc\_lang1 X0 X2) X1))) \wedge ((\forall X2.(m1\_subset\_1 \\
& X2 (k9\_qc\_lang1 X0)) \Rightarrow ((v3\_qc\_lang1 X2 X0) \Rightarrow (k4\_qc\_lang3 X0 X1 X2 = \\
& k4\_qc\_lang3 X0 X1 (k18\_qc\_lang1 X0 X2)))) \wedge ((\forall X2.(m1\_subset\_1 \\
& X2 (k9\_qc\_lang1 X0)) \Rightarrow ((v4\_qc\_lang1 X2 X0) \Rightarrow (k4\_qc\_lang3 X0 X1 X2 = \\
& k4\_subset\_1 X1 (k4\_qc\_lang3 X0 X1 (k19\_qc\_lang1 X0 X2)) (k4\_qc\_lang3 \\
& X0 X1 (k20\_qc\_lang1 X0 X2)))))) \wedge (\forall X2.(m1\_subset\_1 X2 (k9\_qc\_lang1 \\
& X0)) \Rightarrow ((v5\_qc\_lang1 X2 X0) \Rightarrow (k4\_qc\_lang3 X0 X1 X2 = k4\_qc\_lang3 X0 \\
& X1 (k22\_qc\_lang1 X0 X2)))))))))
\end{aligned} \tag{1}$$

## Theorem 1

$$\begin{aligned}
& \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k9\_qc\_lang1 \\
& X0)) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_qc\_lang1 X0)))) \Rightarrow ((v3\_qc\_lang1 X1 X0) \Rightarrow (k4\_qc\_lang3 X0 X2 X1 = \\
& k4\_qc\_lang3 X0 X2 (k18\_qc\_lang1 X0 X1))))))
\end{aligned}$$