

# l1\_cqc\_lang

(TMbMr93PGh7o8ePS2avJ5duEktHF4f87Rq5)

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Let  $m1\_qc\_lang1 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k3\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k4\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m2\_subset\_1 X1 (k2\_qc\_lang1 \\ X0) (k4\_qc\_lang1 X0)) \Rightarrow (\forall X2.(m2\_subset\_1 X2 (k2\_qc\_lang1 \\ X0) (k3\_qc\_lang1 X0)) \Rightarrow (X1 \neq X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\ X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\neg v1\_xboole\_0 (k4\_qc\_lang1 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1 X0) \Rightarrow (m1\_subset\_1 (k4\_qc\_lang1 X0) (k1\_zfmisc\_1 \\ (k2\_qc\_lang1 X0))) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \Rightarrow ((m1\_subset\_1 X1 X0) \Leftrightarrow \\ (X1 \in X0))) \wedge ((v1\_xboole\_0 X0) \Rightarrow ((m1\_subset\_1 X1 X0) \Leftrightarrow (v1\_xboole\_0 \\ X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ X0)) \Rightarrow (v1\_xboole\_0 X1)) \quad (6)$$

## Theorem 1

$$\forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m2\_subset\_1 X1 (k2\_qc\_lang1 \\ X0) (k3\_qc\_lang1 X0)) \Rightarrow (\neg X1 \in k4\_qc\_lang1 X0))$$