

t64\_cqc\_the3  
(TMSdLW3dEEGdn6759cZLeiRTGuaaCxs99d6)

October 27, 2020

Let  $m1\_qc\_lang1 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k3\_cqc\_lang : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k3\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k13\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k24\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m2\_subset\_1 X1 (k2\_qc\_lang1 \\ X0) (k3\_cqc\_lang X0)) \Rightarrow (\forall X2.(m2\_subset\_1 X2 (k2\_qc\_lang1 \\ X0) (k3\_qc\_lang1 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k9\_qc\_lang1 \\ X0)) \Rightarrow (\neg(X1 \neq X2) \wedge ((\neg X1 \in k24\_qc\_lang1 X0 X3) \wedge (X1 \in k24\_qc\_lang1 \\ X0 (k13\_cqc\_lang X0 X3 X2)))))))) \end{aligned} \tag{1}$$

**Theorem 1**

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m2\_subset\_1 X1 (k9\_qc\_lang1 \\ X0) (k3\_cqc\_lang X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k9\_qc\_lang1 \\ X0)) \Rightarrow (\forall X3.(m2\_subset\_1 X3 (k2\_qc\_lang1 X0) (k3\_qc\_lang1 \\ X0)) \Rightarrow (\forall X4.(m2\_subset\_1 X4 (k2\_qc\_lang1 X0) (k3\_qc\_lang1 \\ X0)) \Rightarrow (\neg(X1 = k13\_cqc\_lang X0 X2 X3) \wedge ((X3 \neq X4) \wedge ((\neg X4 \in k24\_qc\_lang1 \\ X0 X2) \wedge (X4 \in k24\_qc\_lang1 X0 X1)))))))) \end{aligned}$$