

t59\_qc\_lang2  
(TMFzfZoNp2PwWesQVQssidMii2caHMhkzS3)

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  $r3\_qc\_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_qc\_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k9\_qc\_lang1 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k9\_qc\_lang1 X0)) \Rightarrow (((r2\_qc\_lang2 \\ X0 X1 X2) \wedge (r2\_qc\_lang2 X0 X2 X1)) \Rightarrow (X1 = X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k9\_qc\_lang1 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k9\_qc\_lang1 X0)) \Rightarrow ((r3\_qc\_lang2 \\ X0 X1 X2) \Leftrightarrow ((r2\_qc\_lang2 X0 X1 X2) \wedge (X1 \neq X2)))))) \end{aligned} \quad (2)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k9\_qc\_lang1 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k9\_qc\_lang1 X0)) \Rightarrow (\neg(r3\_qc\_lang2 \\ X0 X1 X2) \wedge (r2\_qc\_lang2 X0 X2 X1)))) \end{aligned}$$