

t51\_qc\_lang2  
(TMMWqxoh6m4wB6ExKtNYPoy2AmhxyoDMwRy)

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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  $r1\_qc\_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k11\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $v2\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k22\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k18\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k9\_qc\_lang1 \\ X0)) \Rightarrow (\neg(X1 \neq k12\_qc\_lang1 X0) \wedge ((\neg v2\_qc\_lang1 X1 X0) \wedge ((\neg v3\_qc\_lang1 \\ X1 X0) \wedge ((\neg v4\_qc\_lang1 X1 X0) \wedge (\neg v5\_qc\_lang1 X1 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k9\_qc\_lang1 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k9\_qc\_lang1 X0)) \Rightarrow ((v5\_qc\_lang1 \\ X1 X0) \Rightarrow ((r1\_qc\_lang2 X0 X2 X1) \Leftrightarrow (X2 = k22\_qc\_lang1 X0 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k9\_qc\_lang1 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k9\_qc\_lang1 X0)) \Rightarrow ((v4\_qc\_lang1 \\ X1 X0) \Rightarrow ((r1\_qc\_lang2 X0 X2 X1) \Leftrightarrow ((X2 = k19\_qc\_lang1 X0 X1) \vee (X2 = k20\_qc\_lang1 \\ X0 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k9\_qc\_lang1 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k9\_qc\_lang1 X0)) \Rightarrow ((v3\_qc\_lang1 \\ X1 X0) \Rightarrow ((r1\_qc\_lang2 X0 X2 X1) \Leftrightarrow (X2 = k18\_qc\_lang1 X0 X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k9\_qc\_lang1 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k9\_qc\_lang1 X0)) \Rightarrow (\neg(v2\_qc\_lang1 \\ X1 X0) \wedge (r1\_qc\_lang2 X0 X2 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0))\Rightarrow(\neg r1\_qc\_lang2\ X0\ X1\ (k12\_qc\_lang1\ X0))) \quad (6)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0))\Rightarrow(\neg(v5\_qc\_lang1\ X1\ X0)\wedge(r1\_xxreal\_0\ (k3\_finseq\_1\ (k11\_qc\_lang1\ X0\ X1))\ (k3\_finseq\_1\ (k11\_qc\_lang1\ X0\ (k22\_qc\_lang1\ X0\ X1)))))) \quad (7)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0))\Rightarrow((v4\_qc\_lang1\ X1\ X0)\Rightarrow((\neg r1\_xxreal\_0\ (k3\_finseq\_1\ (k11\_qc\_lang1\ X0\ X1))\ (k3\_finseq\_1\ (k11\_qc\_lang1\ X0\ (k19\_qc\_lang1\ X0\ X1))))\wedge(\neg r1\_xxreal\_0\ (k3\_finseq\_1\ (k11\_qc\_lang1\ X0\ X1))\ (k3\_finseq\_1\ (k11\_qc\_lang1\ X0\ (k20\_qc\_lang1\ X0\ X1))))))) \quad (8)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0))\Rightarrow(\neg(v3\_qc\_lang1\ X1\ X0)\wedge(r1\_xxreal\_0\ (k3\_finseq\_1\ (k11\_qc\_lang1\ X0\ X1))\ (k3\_finseq\_1\ (k11\_qc\_lang1\ X0\ (k18\_qc\_lang1\ X0\ X1)))))) \quad (9)$$

**Theorem 1**

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k9\_qc\_lang1\ X0))\Rightarrow(\neg(r1\_qc\_lang2\ X0\ X1\ X2)\wedge(r1\_xxreal\_0\ (k3\_finseq\_1\ (k11\_qc\_lang1\ X0\ X2))\ (k3\_finseq\_1\ (k11\_qc\_lang1\ X0\ X1))))))$$