

t80\_qc\_lang2  
(TMLoirKJ2t6CuHMwWsqAp3yUpBdTuiu8FZi)

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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  $k5\_numbers : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k8\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_card\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $r2\_qc\_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r3\_qc\_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k9\_qc\_lang1 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow (\forall X3.(m2\_subset\_1 \\ X3 (k6\_qc\_lang1 X0) (k8\_qc\_lang1 X0 X2)) \Rightarrow (\forall X4.((v3\_card\_1 \\ X4 X2) \wedge (m2\_finseq\_1 X4 (k2\_qc\_lang1 X0)))) \Rightarrow (\neg r3\_qc\_lang2 X0 X1 \\ (k10\_qc\_lang1 X0 X3 X4)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_qc\_lang1 X0) \wedge ((m1\_subset\_1 \\ X1 (k9\_qc\_lang1 X0)) \wedge (m1\_subset\_1 X2 (k9\_qc\_lang1 X0)))) \Rightarrow (r2\_qc\_lang2 \\ X0 X1 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k5\_numbers) \wedge (m1\_qc\_lang1 \\ X1)) \Rightarrow (\neg v1\_xboole\_0 (k8\_qc\_lang1 X1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\ X2 X0 X1) \Rightarrow (m1\_subset\_1 X2 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_qc\_lang1\ X0)\wedge(m1\_subset\_1\ X1\ k5\_numbers))\Rightarrow (m1\_subset\_1\ (k8\_qc\_lang1\ X0\ X1)\ (k1\_zfmisc\_1\ (k6\_qc\_lang1\ X0))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_qc\_lang1\ X0)\wedge((m1\_subset\_1\ X1\ (k6\_qc\_lang1\ X0))\wedge(m1\_finseq\_1\ X2\ (k2\_qc\_lang1\ X0))))\Rightarrow(m1\_subset\_1\ (k10\_qc\_lang1\ X0\ X1\ X2)\ (k9\_qc\_lang1\ X0)) \quad (7)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k9\_qc\_lang1\ X0))\Rightarrow((r3\_qc\_lang2\ X0\ X1\ X2)\Leftrightarrow((r2\_qc\_lang2\ X0\ X1\ X2)\wedge(X1\neq X2)))))) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_xboole\_0\ X1)) \quad (9)$$

**Theorem 1**

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k5\_numbers)\Rightarrow(\forall X3.(m2\_subset\_1\ X3\ (k6\_qc\_lang1\ X0)\ (k8\_qc\_lang1\ X0\ X2))\Rightarrow(\forall X4.((v3\_card\_1\ X4\ X2)\wedge(m2\_finseq\_1\ X4\ (k2\_qc\_lang1\ X0))\Rightarrow((r2\_qc\_lang2\ X0\ X1\ (k10\_qc\_lang1\ X0\ X3\ X4))\Leftrightarrow(X1 = k10\_qc\_lang1\ X0\ X3\ X4)))))))$$