t49_cqc_the3 (TMTMHH8he1T1oWfGfABSCyEaV2QHqiaJDH4)

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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 $k9\_qc\_lang1 : \iota \Rightarrow \iota$ be given. Let $k3\_cqc\_lang : \iota \Rightarrow \iota$ be given. Let $r6\_cqc\_the3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5\_cqc\_the3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_cqc\_the3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m2\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X3.(m2\_subset\_1\ X3\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X4.(m2\_subset\_1\ X4\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (((r6\_cqc\_the3\ X0\ X1\ X2) \wedge (r6\_cqc\_the3\ X0\ X3\ X4)) \Rightarrow ((r1\_cqc\_the3\ X0\ X2\ X4) \Leftrightarrow (r1\_cqc\_the3\ X0\ (k6\_cqc\_lang\ X0\ X3)\ (k6\_cqc\_lang\ X0\ X1)))))))) \tag{1}$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\neg v1\_xboole\_0\ (k3\_cqc\_lang\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\neg v1\_xboole\_0\ (k9\_qc\_lang1\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_qc\_lang1\ X0) \wedge (m1\_subset\_1\ X1\ (k3\_cqc\_lang\ X0))) \Rightarrow (m2\_subset\_1\ (k6\_cqc\_lang\ X0\ X1)\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(m1\_subset\_1\ (k3\_cqc\_lang\ X0)\ (k1\_zfmisc\_1\ (k9\_qc\_lang1\ X0))) \tag{6}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(m2\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0))\Rightarrow((r5\_cqc\_the3\ X0\ X1\ X2)\Leftrightarrow((r1\_cqc\_the3\ X0\ X1\ X2)\wedge(r1\_cqc\_the3\ X0\ X2\ X1))))) \tag{7}$$

Theorem 1

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(m2\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0))\Rightarrow(\forall X3.(m2\_subset\_1\ X3\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0))\Rightarrow(\forall X4.(m2\_subset\_1\ X4\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0))\Rightarrow(((r6\_cqc\_the3\ X0\ X1\ X2)\wedge(r6\_cqc\_the3\ X0\ X3\ X4))\Rightarrow((r5\_cqc\_the3\ X0\ X2\ X4)\Leftrightarrow(r5\_cqc\_the3\ X0\ (k6\_cqc\_lang\ X0\ X1)\ (k6\_cqc\_lang\ X0\ X3))))))))$$