t47_cqc_the3 (TMSfmts1Pj8J6iKYEKRpiv5JQx5X61njkCp)

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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 $v6\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_cqc\_the3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m2\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (((v6\_qc\_lang1\ X1\ X0) \wedge (r1\_cqc\_the3\ X0\ (k6\_cqc\_lang\ X0\ X1)\ (k6\_cqc\_lang\ X0\ X2))) \Rightarrow (r1\_cqc\_the3\ X0\ X2\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m2\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (((v6\_qc\_lang1\ X1\ X0) \wedge (r1\_cqc\_the3\ X0\ X1\ X2)) \Rightarrow (r1\_cqc\_the3\ X0\ (k6\_cqc\_lang\ X0\ X2)\ (k6\_cqc\_lang\ X0\ X1))))) \tag{2}$$

Theorem 1

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m2\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (((v6\_qc\_lang1\ X1\ X0) \wedge (v6\_qc\_lang1\ X2\ X0)) \Rightarrow ((r1\_cqc\_the3\ X0\ X1\ X2) \Leftrightarrow (r1\_cqc\_the3\ X0\ (k6\_cqc\_lang\ X0\ X2)\ (k6\_cqc\_lang\ X0\ X1))))))$$