t87_qc_lang2 (TMMRBZ-zoq1zQHMVYa97EJjZXshiTVqVtdCS)

October 27, 2020

Let $m1\_qc\_lang1 : \iota \Rightarrow o$ be given. Let $k15\_qc\_lang2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_qc\_lang2 : \iota \Rightarrow \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12\_qc\_lang1 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_qc\_lang1 : \iota \Rightarrow \iota$ be given. Let $r2\_qc\_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)) \Rightarrow ((r2\_qc\_lang2\ X0\ X1\ (k1\_qc\_lang2\ X0)) \Leftrightarrow ((X1 = k1\_qc\_lang2\ X0) \vee (X1 = k12\_qc\_lang1\ X0)))) \tag{1}$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (m1\_subset\_1\ (k1\_qc\_lang2\ X0)\ (k9\_qc\_lang1\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (m1\_subset\_1\ (k12\_qc\_lang1\ X0)\ (k9\_qc\_lang1\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_tarski\ X0\ X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \tag{5}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)) \Rightarrow (\forall X2.(X2 = k15\_qc\_lang2\ X0\ X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow (\exists X4.(m1\_subset\_1\ X4\ (k9\_qc\_lang1\ X0)) \wedge ((X4 = X3) \wedge (r2\_qc\_lang2\ X0\ X4\ X1)))))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarski\ X0\ X1 = k2\_tarski\ X1\ X0 \tag{7}$$

Theorem 1

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (k15\_qc\_lang2\ X0\ (k1\_qc\_lang2\ X0) = k2\_tarski\ (k12\_qc\_lang1\ X0)\ (k1\_qc\_lang2\ X0))$$