t12_qc_lang2 (TMRMD-VNQ2zDNTTX4nXtKorNJewqoQYdGZYW)

October 27, 2020

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 $k4\_qc\_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_qc\_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k9\_qc\_lang1\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (k9\_qc\_lang1\ X0)) \Rightarrow ((k14\_qc\_lang1\ X0\ X1\ X2 = k14\_qc\_lang1\ X0\ X3\ X4) \Rightarrow ((X1 = X3) \wedge (X2 = X4))))))) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k9\_qc\_lang1\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (k9\_qc\_lang1\ X0)) \Rightarrow ((k2\_qc\_lang2\ X0\ X1\ X2 = k2\_qc\_lang2\ X0\ X3\ X4) \Rightarrow ((X1 = X3) \wedge (X2 = X4))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_qc\_lang1\ X0) \wedge ((m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)) \wedge (m1\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)))) \Rightarrow (m1\_subset\_1\ (k2\_qc\_lang2\ X0\ X1\ X2)\ (k9\_qc\_lang1\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)) \Rightarrow (k4\_qc\_lang2\ X0\ X1\ X2 = k14\_qc\_lang1\ X0\ (k2\_qc\_lang2\ X0\ X1\ X2)\ (k2\_qc\_lang2\ X0\ X2\ X1)))) \tag{4}$$

Theorem 1

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k9\_qc\_lang1\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k9\_qc\_lang1\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (k9\_qc\_lang1\ X0))\Rightarrow((k4\_qc\_lang2\ X0\ X1\ X2 = k4\_qc\_lang2\ X0\ X3\ X4)\Rightarrow((X1 = X3)\wedge(X2 = X4)))))))$$