t57_cqc_the3 (TMTQxrsE3hLKMsAMy4CA7JhUaEsJqXRiezb)

October 27, 2020

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 $r7\_cqc\_the3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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. Let $k2\_qc\_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_qc\_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m2\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X3.(m2\_subset\_1\ X3\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X4.(m2\_subset\_1\ X4\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (((r7\_cqc\_the3\ X0\ X1\ X2) \wedge (r7\_cqc\_the3\ X0\ X3\ X4)) \Rightarrow (r7\_cqc\_the3\ X0\ (k8\_cqc\_lang\ X0\ X1\ X3)\ (k8\_cqc\_lang\ X0\ X2\ X4)))))))) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m2\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X3.(m2\_subset\_1\ X3\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X4.(m2\_subset\_1\ X4\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (((r7\_cqc\_the3\ X0\ X1\ X2) \wedge (r7\_cqc\_the3\ X0\ X3\ X4)) \Rightarrow (r7\_cqc\_the3\ X0\ (k7\_cqc\_lang\ X0\ X1\ X3)\ (k7\_cqc\_lang\ X0\ X2\ X4)))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ X0\ X1) \Leftrightarrow (m1\_subset\_1\ X2\ X1)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_qc\_lang1\ X0)\wedge((m1\_subset\_1\ X1\ (k3\_cqc\_lang\ X0))\wedge(m1\_subset\_1\ X2\ (k3\_cqc\_lang\ X0))))\Rightarrow(k8\_cqc\_lang\ X0\ X1\ X2 = k2\_qc\_lang2\ X0\ X1\ X2) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_qc\_lang1\ X0)\wedge((m1\_subset\_1\ X1\ (k3\_cqc\_lang\ X0))\wedge(m1\_subset\_1\ X2\ (k3\_cqc\_lang\ X0))))\Rightarrow(k7\_cqc\_lang\ X0\ X1\ X2 = k14\_qc\_lang1\ X0\ X1\ X2) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_qc\_lang1\ X0)\wedge((m1\_subset\_1\ X1\ (k3\_cqc\_lang\ X0))\wedge(m1\_subset\_1\ X2\ (k3\_cqc\_lang\ X0))))\Rightarrow(k10\_cqc\_lang\ X0\ X1\ X2 = k4\_qc\_lang2\ X0\ X1\ X2) \tag{6}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\neg v1\_xboole\_0\ (k3\_cqc\_lang\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Rightarrow(m1\_subset\_1\ X2\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_qc\_lang1\ X0)\wedge((m1\_subset\_1\ X1\ (k3\_cqc\_lang\ X0))\wedge(m1\_subset\_1\ X2\ (k3\_cqc\_lang\ X0))))\Rightarrow(m2\_subset\_1\ (k8\_cqc\_lang\ X0\ X1\ X2)\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(m1\_subset\_1\ (k3\_cqc\_lang\ X0)\ (k1\_zfmisc\_1\ (k9\_qc\_lang1\ X0))) \tag{10}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k9\_qc\_lang1\ X0))\Rightarrow(k4\_qc\_lang2\ X0\ X1\ X2 = k14\_qc\_lang1\ X0\ (k2\_qc\_lang2\ X0\ X1\ X2)\ (k2\_qc\_lang2\ X0\ X2\ X1)))) \tag{11}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_xboole\_0\ X1)) \tag{12}$$

Theorem 1

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(m2\_subset\_1\ X1\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0))\Rightarrow(\forall X3.(m2\_subset\_1\ X3\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0))\Rightarrow(\forall X4.(m2\_subset\_1\ X4\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0))\Rightarrow(((r7\_cqc\_the3\ X0\ X1\ X2)\wedge(r7\_cqc\_the3\ X0\ X3\ X4))\Rightarrow(r7\_cqc\_the3\ X0\ (k10\_cqc\_lang\ X0\ X1\ X3)\ (k10\_cqc\_lang\ X0\ X2\ X4)))))))$$