

t26_cqc_the3 (TMQi-
Esc3muXFoMZmCKQMD1RiWtWLPxT8LZL)

October 27, 2020

Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k3_cqc_lang : \iota \Rightarrow \iota$ be given. Let $r4_cqc_the3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_cqc_the3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ (k3_cqc_lang\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ (k3_cqc_lang\ X0))) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1 \\ (k3_cqc_lang\ X0))) \Rightarrow ((r2_cqc_the3\ X0\ X1\ X2) \wedge (r2_cqc_the3\ X0\ X2 \\ X3)) \Rightarrow (r2_cqc_the3\ X0\ X1\ X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ (k3_cqc_lang\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ (k3_cqc_lang\ X0))) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1 \\ (k3_cqc_lang\ X0))) \Rightarrow ((r4_cqc_the3\ X0\ X1\ X2) \Rightarrow (r4_cqc_the3\ X0\ (k4_subset_1 \\ (k3_cqc_lang\ X0)\ X1\ X3)\ (k4_subset_1\ (k3_cqc_lang\ X0)\ X2\ X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ (k3_cqc_lang\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ (k3_cqc_lang\ X0))) \Rightarrow ((r4_cqc_the3\ X0\ X1\ X2) \Leftrightarrow ((r2_cqc_the3\ X0\ X1 \\ X2) \wedge (r2_cqc_the3\ X0\ X2\ X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((m1_subset_1\ X1\ (k1_zfmisc_1 \\ X0)) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ X0))) \Rightarrow (m1_subset_1\ (k4_subset_1 \\ X0\ X1\ X2)\ (k1_zfmisc_1\ X0)) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow & (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (k3_cqc_lang\ X0))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k3_cqc_lang\ X0))) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1 \\ & (k3_cqc_lang\ X0))) \Rightarrow (\forall X4.(m1_subset_1\ X4\ (k1_zfmisc_1 \\ & (k3_cqc_lang\ X0))) \Rightarrow (((r4_cqc_the3\ X0\ X1\ X2) \wedge (r2_cqc_the3\ X0\ (\\ k4_subset_1\ (k3_cqc_lang\ X0)\ X1\ X3)\ X4) \Rightarrow (r2_cqc_the3\ X0\ (k4_subset_1 \\ & (k3_cqc_lang\ X0)\ X2\ X3)\ X4)))))) \end{aligned}$$