

t26_cqc_the1 (TMTTAm- MMhkyXYZP5Ad69TRbYkdxk9z1L9VJ)

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 $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_cqc_the1 : \iota$ be given. Let $r2_cqc_the1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_2 : \iota$ be given. Let $np_3 : \iota$ be given. Let $np_4 : \iota$ be given. Let $np_5 : \iota$ be given. Let $np_6 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $np_7 : \iota$ be given. Let $np_8 : \iota$ be given. Let $np_9 : \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_cqc_the1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_cqc_lang : \iota \Rightarrow \iota$ be given. Let $k9_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k8_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k11_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (k3_cqc_lang X0))) \Rightarrow (\forall X2.(m2_finseq_1 X2 (k2_zfmisc_1 \\ (k3_cqc_lang X0) k2_cqc_the1)) \Rightarrow ((r2_cqc_the1 X0 X1 X2) \Rightarrow (r1_xxreal_0 \\ np_1 (k3_finseq_1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_finseq_1\ X1\ (k2_zfmisc_1 \\
& \quad (k3_cqc_lang\ X0)\ k2_cqc_the1)) \Rightarrow (\forall X2.(v7_ordinal1\ X2) \Rightarrow \\
& \quad (\neg(r1_xxreal_0\ np_1\ X2) \wedge ((r1_xxreal_0\ X2\ (k3_finseq_1\ X1)) \wedge \\
& \quad ((k2_xtuple_0\ (k1_funct_1\ X1\ X2) \neq k6_numbers) \wedge ((k2_xtuple_0 \\
& \quad (k1_funct_1\ X1\ X2) \neq np_1) \wedge ((k2_xtuple_0\ (k1_funct_1\ X1\ X2) \neq np_2) \wedge \\
& \quad ((k2_xtuple_0\ (k1_funct_1\ X1\ X2) \neq np_3) \wedge ((k2_xtuple_0\ (k1_funct_1 \\
& \quad X1\ X2) \neq np_4) \wedge ((k2_xtuple_0\ (k1_funct_1\ X1\ X2) \neq np_5) \wedge ((k2_xtuple_0 \\
& \quad (k1_funct_1\ X1\ X2) \neq np_6) \wedge ((k2_xtuple_0\ (k1_funct_1\ X1\ X2) \neq np_7) \wedge \\
& \quad ((k2_xtuple_0\ (k1_funct_1\ X1\ X2) \neq np_8) \wedge (k2_xtuple_0\ (k1_funct_1 \\
& \quad \quad X1\ X2) \neq np_9))))))))))))) \\
& \hspace{15em} (2)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& ((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\
& ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \\
& \hspace{15em} (3)
\end{aligned}$$

Assume the following.

$$r1_xxreal_0\ np_1\ np_1 \hspace{15em} (4)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \hspace{15em} (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \hspace{15em} (6)$$

Assume the following.

$$(\neg v1_xboole_0\ k4_ordinal1) \wedge (v3_ordinal1\ k4_ordinal1) \hspace{15em} (7)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\
& \quad (k3_cqc_lang\ X0))) \Rightarrow (\forall X2.(m2_finseq_1\ X2\ (k2_zfmisc_1 \\
& \quad (k3_cqc_lang\ X0)\ k2_cqc_the1)) \Rightarrow ((r2_cqc_the1\ X0\ X1\ X2) \Leftrightarrow ((X2 \neq \\
& \quad k1_xboole_0) \wedge (\forall X3.(m1_subset_1\ X3\ k5_numbers) \Rightarrow (((r1_xxreal_0 \\
& \quad np_1\ X3) \wedge (r1_xxreal_0\ X3\ (k3_finseq_1\ X2))) \Rightarrow (r1_cqc_the1\ X0 \\
& \quad \quad X2\ X3\ X1))))))))) \\
& \hspace{15em} (8)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_finseq_1\ X1\ (k2_zfmisc_1 \\
& \quad (k3_cqc_lang\ X0)\ k2_cqc_the1)) \Rightarrow (\forall X2.(v7_ordinal1\ X2) \Rightarrow \\
& \quad (\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1\ (k3_cqc_lang\ X0))) \Rightarrow \\
& \quad (((k2_xtuple_0\ (k1_funct_1\ X1\ X2) = k6_numbers) \Rightarrow ((r1_cqc_the1 \\
& \quad X0\ X1\ X2\ X3) \Leftrightarrow (k1_xtuple_0\ (k1_funct_1\ X1\ X2) \in X3))) \wedge (((k2_xtuple_0 \\
& \quad (k1_funct_1\ X1\ X2) = np_1) \Rightarrow ((r1_cqc_the1\ X0\ X1\ X2\ X3) \Leftrightarrow (k1_xtuple_0 \\
& \quad (k1_funct_1\ X1\ X2) = k5_cqc_lang\ X0))) \wedge (((k2_xtuple_0\ (k1_funct_1 \\
& \quad X1\ X2) = np_2) \Rightarrow ((r1_cqc_the1\ X0\ X1\ X2\ X3) \Leftrightarrow (\exists X4.(m2_subset_1 \\
& \quad X4\ (k9_qc_lang1\ X0)\ (k3_cqc_lang\ X0)) \wedge (k1_xtuple_0\ (k1_funct_1 \\
& \quad X1\ X2) = k8_cqc_lang\ X0\ (k8_cqc_lang\ X0\ (k6_cqc_lang\ X0\ X4)\ X4)\ X4)))) \wedge \\
& \quad (((k2_xtuple_0\ (k1_funct_1\ X1\ X2) = np_3) \Rightarrow ((r1_cqc_the1\ X0\ X1 \\
& \quad X2\ X3) \Leftrightarrow (\exists X4.(m2_subset_1\ X4\ (k9_qc_lang1\ X0)\ (k3_cqc_lang \\
& \quad X0)) \wedge (\exists X5.(m2_subset_1\ X5\ (k9_qc_lang1\ X0)\ (k3_cqc_lang \\
& \quad X0)) \wedge (k1_xtuple_0\ (k1_funct_1\ X1\ X2) = k8_cqc_lang\ X0\ X4\ (k8_cqc_lang \\
& \quad X0\ (k6_cqc_lang\ X0\ X4)\ X5)))))) \wedge (((k2_xtuple_0\ (k1_funct_1\ X1 \\
& \quad X2) = np_4) \Rightarrow ((r1_cqc_the1\ X0\ X1\ X2\ X3) \Leftrightarrow (\exists X4.(m2_subset_1 \\
& \quad X4\ (k9_qc_lang1\ X0)\ (k3_cqc_lang\ X0)) \wedge (\exists X5.(m2_subset_1 \\
& \quad X5\ (k9_qc_lang1\ X0)\ (k3_cqc_lang\ X0)) \wedge (\exists X6.(m2_subset_1 \\
& \quad X6\ (k9_qc_lang1\ X0)\ (k3_cqc_lang\ X0)) \wedge (k1_xtuple_0\ (k1_funct_1 \\
& \quad X1\ X2) = k8_cqc_lang\ X0\ (k8_cqc_lang\ X0\ X4\ X5)\ (k8_cqc_lang\ X0\ (k6_cqc_lang \\
& \quad X0\ (k7_cqc_lang\ X0\ X5\ X6))\ (k6_cqc_lang\ X0\ (k7_cqc_lang\ X0\ X4\ X6)))))) \wedge \\
& \quad (((k2_xtuple_0\ (k1_funct_1\ X1\ X2) = np_5) \Rightarrow ((r1_cqc_the1\ X0\ X1 \\
& \quad X2\ X3) \Leftrightarrow (\exists X4.(m2_subset_1\ X4\ (k9_qc_lang1\ X0)\ (k3_cqc_lang \\
& \quad X0)) \wedge (\exists X5.(m2_subset_1\ X5\ (k9_qc_lang1\ X0)\ (k3_cqc_lang \\
& \quad X0)) \wedge (k1_xtuple_0\ (k1_funct_1\ X1\ X2) = k8_cqc_lang\ X0\ (k7_cqc_lang \\
& \quad X0\ X4\ X5)\ (k7_cqc_lang\ X0\ X5\ X4)))))) \wedge (((k2_xtuple_0\ (k1_funct_1 \\
& \quad X1\ X2) = np_6) \Rightarrow ((r1_cqc_the1\ X0\ X1\ X2\ X3) \Leftrightarrow (\exists X4.(m2_subset_1 \\
& \quad X4\ (k9_qc_lang1\ X0)\ (k3_cqc_lang\ X0)) \wedge (\exists X5.(m2_subset_1 \\
& \quad X5\ (k2_qc_lang1\ X0)\ (k3_qc_lang1\ X0)) \wedge (k1_xtuple_0\ (k1_funct_1 \\
& \quad X1\ X2) = k8_cqc_lang\ X0\ (k11_cqc_lang\ X0\ X5\ X4)\ X4)))))) \wedge (((k2_xtuple_0 \\
& \quad (k1_funct_1\ X1\ X2) = np_7) \Rightarrow ((r1_cqc_the1\ X0\ X1\ X2\ X3) \Leftrightarrow (\exists X4. \\
& \quad (m1_subset_1\ X4\ k5_numbers) \wedge (\exists X5.(m1_subset_1\ X5\ k5_numbers) \wedge \\
& \quad (\exists X6.(m2_subset_1\ X6\ (k9_qc_lang1\ X0)\ (k3_cqc_lang\ X0)) \wedge \\
& \quad (\exists X7.(m2_subset_1\ X7\ (k9_qc_lang1\ X0)\ (k3_cqc_lang\ X0)) \wedge \\
& \quad ((r1_xxreal_0\ np_1\ X4) \wedge ((\neg r1_xxreal_0\ X2\ X4) \wedge (r1_xxreal_0 \\
& \quad np_1\ X5) \wedge ((\neg r1_xxreal_0\ X4\ X5) \wedge ((X6 = k1_xtuple_0\ (k1_funct_1 \\
& \quad X1\ X5)) \wedge ((X7 = k1_xtuple_0\ (k1_funct_1\ X1\ X2)) \wedge (k1_xtuple_0\ (k1_funct_1 \\
& \quad X1\ X4) = k8_cqc_lang\ X0\ X6\ X7)))))))))) \wedge (((k2_xtuple_0\ (k1_funct_1 \\
& \quad X1\ X2) = np_8) \Rightarrow ((r1_cqc_the1\ X0\ X1\ X2\ X3) \Leftrightarrow (\exists X4.(m1_subset_1 \\
& \quad X4\ k5_numbers) \wedge (\exists X5.(m2_subset_1\ X5\ (k9_qc_lang1\ X0)\ (\\
& \quad k3_cqc_lang\ X0)) \wedge (\exists X6.(m2_subset_1\ X6\ (k9_qc_lang1\ X0) \\
& \quad (k3_cqc_lang\ X0)) \wedge (\exists X7.(m2_subset_1\ X7\ (k2_qc_lang1\ X0) \\
& \quad (k3_qc_lang1\ X0)) \wedge ((r1_xxreal_0\ np_1\ X4) \wedge ((\neg r1_xxreal_0\ X2 \\
& \quad X4) \wedge ((k1_xtuple_0\ (k1_funct_1\ X1\ X4) = k8_cqc_lang\ X0\ X5\ X6) \wedge ((\\
& \quad \neg X7 \in k24_qc_lang1\ X0\ X5) \wedge (k1_xtuple_0\ (k1_funct_1\ X1\ X2) = k8_cqc_lang \\
& \quad X0\ X5\ (k11_cqc_lang\ X0\ X7\ X6)))))))))) \wedge (((k2_xtuple_0\ (k1_funct_1 \\
& \quad X1\ X2) = np_9) \Rightarrow ((r1_cqc_the1\ X0\ X1\ X2\ X3) \Leftrightarrow (\exists X4.(m1_subset_1 \\
& \quad X4\ k5_numbers) \wedge (\exists X5.(m2_subset_1\ X5\ (k2_qc_lang1\ X0)\ (\\
& \quad k3_qc_lang1\ X0)) \wedge (\exists X6.(m2_subset_1\ X6\ (k2_qc_lang1\ X0) \\
& \quad (k3_qc_lang1\ X0)) \wedge (\exists X7.(m1_subset_1\ X7\ (k9_qc_lang1\ X0)) \wedge \\
& \quad ((r1_xxreal_0\ np_1\ X4) \wedge ((\neg r1_xxreal_0\ X2\ X4) \wedge ((k13_cqc_lang \\
& \quad X0\ X7\ X5 \in k3_cqc_lang\ X0) \wedge ((k13_cqc_lang\ X0\ X7\ X6 \in k3_cqc_lang\ X0) \wedge \\
& \quad ((\neg X5 \in k24_qc_lang1\ X0\ X7) \wedge ((k13_cqc_lang\ X0\ X7\ X5 = k1_xtuple_0 \\
& \quad (k1_funct_1\ X1\ X4) \wedge (k13_cqc_lang\ X0\ X7\ X6 = k1_xtuple_0\ (k1_funct_1 \\
& \quad X1\ X2))
\end{aligned}$$

Assume the following.

$$\forall X0.((v3_ordinal1 X0)\wedge(v1_finset.1 X0))\Rightarrow(v7_ordinal1 X0) \quad (10)$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0)\Rightarrow(\forall X1.(m1_subset.1 X1 X0)\Rightarrow(v3_ordinal1 X1)) \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset.1 X0 k4_ordinal1)\Rightarrow(v1_finset.1 X0) \quad (12)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0)\Rightarrow(\forall X1.(m1_subset.1 X1 (k1_zfmisc.1 \\ (k3_cqc_lang X0)))\Rightarrow(\forall X2.(m2_finseq.1 X2 (k2_zfmisc.1 \\ (k3_cqc_lang X0) k2_cqc_the1))\Rightarrow(\neg(r2_cqc_the1 X0 X1 X2)\wedge((k2_xtuple.0 \\ (k1_funct.1 X2 np_1)\neq k6_numbers)\wedge((k2_xtuple.0 (k1_funct.1 \\ X2 np_1)\neq np_1)\wedge((k2_xtuple.0 (k1_funct.1 X2 np_1)\neq np_2)\wedge \\ ((k2_xtuple.0 (k1_funct.1 X2 np_1)\neq np_3)\wedge((k2_xtuple.0 (k1_funct.1 \\ X2 np_1)\neq np_4)\wedge((k2_xtuple.0 (k1_funct.1 X2 np_1)\neq np_5)\wedge \\ (k2_xtuple.0 (k1_funct.1 X2 np_1)\neq np_6)))))))))) \end{aligned}$$