

t68_calcul_1

(TMUTz5jya19a2DVMq1JPcrruE8WNEukXkwu)

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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 $k2_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_calcul_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k13_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_qc_lang2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_qc_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k9_qc_lang1 \\
 & \quad X0) (k3_cqc_lang X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k2_qc_lang1 \\
 & \quad X0) (k3_qc_lang1 X0)) \Rightarrow (\forall X3.(m2_finseq_1 X3 (k3_cqc_lang \\
 & X0)) \Rightarrow ((r4_calcul_1 X0 (k8_finseq_1 (k3_cqc_lang X0) X3 (k12_finseq_1 \\
 & \quad (k3_cqc_lang X0) (k11_cqc_lang X0 X2 (k6_cqc_lang X0 (k6_cqc_lang \\
 & \quad X0 X1)))))) \Rightarrow (r4_calcul_1 X0 (k8_finseq_1 (k3_cqc_lang X0) X3 (\\
 & \quad k12_finseq_1 (k3_cqc_lang X0) (k11_cqc_lang X0 X2 X1)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k9_qc_lang1 \\
 & \quad X0) (k3_cqc_lang X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k2_qc_lang1 \\
 & \quad X0) (k3_qc_lang1 X0)) \Rightarrow (\forall X3.(m2_finseq_1 X3 (k3_cqc_lang \\
 & X0)) \Rightarrow ((r4_calcul_1 X0 (k8_finseq_1 (k3_cqc_lang X0) X3 (k12_finseq_1 \\
 & \quad (k3_cqc_lang X0) (k11_cqc_lang X0 X2 X1)))) \Rightarrow (r4_calcul_1 X0 (k8_finseq_1 \\
 & \quad (k3_cqc_lang X0) X3 (k12_finseq_1 (k3_cqc_lang X0) (k11_cqc_lang \\
 & \quad X0 X2 (k6_cqc_lang X0 (k6_cqc_lang X0 X1))))))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_subset_1\ X1\ (k9_qc_lang1 \\ X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_finseq_1\ X2\ (k3_cqc_lang \\ X0)) \Rightarrow ((r4_calcul_1\ X0\ (k8_finseq_1\ (k3_cqc_lang\ X0)\ X2\ (k12_finseq_1 \\ (k3_cqc_lang\ X0)\ (k6_cqc_lang\ X0\ (k6_cqc_lang\ X0\ X1)))))) \Rightarrow (r4_calcul_1 \\ X0\ (k8_finseq_1\ (k3_cqc_lang\ X0)\ X2\ (k12_finseq_1\ (k3_cqc_lang \\ X0)\ X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_subset_1\ X1\ (k9_qc_lang1 \\ X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_finseq_1\ X2\ (k3_cqc_lang \\ X0)) \Rightarrow ((r4_calcul_1\ X0\ (k8_finseq_1\ (k3_cqc_lang\ X0)\ X2\ (k12_finseq_1 \\ (k3_cqc_lang\ X0)\ X1)))) \Rightarrow (r4_calcul_1\ X0\ (k8_finseq_1\ (k3_cqc_lang \\ X0)\ X2\ (k12_finseq_1\ (k3_cqc_lang\ X0)\ (k6_cqc_lang\ X0\ (k6_cqc_lang \\ X0\ X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0\ X0) \wedge ((\neg v1_xboole_0\ X1) \wedge \\ (m1_subset_1\ X1\ (k1_zfmisc_1\ X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ X2\ X0\ X1) \Leftrightarrow (m1_subset_1\ X2\ X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1\ X0) \wedge (m1_subset_1\ X1\ (k3_cqc_lang \\ X0))) \Rightarrow (k6_cqc_lang\ X0\ X1 = k13_qc_lang1\ X0\ X1) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((m1_qc_lang1\ X0) \wedge ((m1_subset_1 \\ X1\ (k3_qc_lang1\ X0)) \wedge (m1_subset_1\ X2\ (k3_cqc_lang\ X0)))) \Rightarrow (k12_cqc_lang \\ X0\ X1\ X2 = k5_qc_lang2\ X0\ X1\ X2) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((m1_qc_lang1\ X0) \wedge ((m1_subset_1 \\ X1\ (k3_qc_lang1\ X0)) \wedge (m1_subset_1\ X2\ (k3_cqc_lang\ X0)))) \Rightarrow (k11_cqc_lang \\ X0\ X1\ X2 = k15_qc_lang1\ X0\ X1\ X2) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (\neg v1_xboole_0\ (k3_qc_lang1\ X0)) \quad (9)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (\neg v1_xboole_0\ (k2_qc_lang1\ X0)) \quad (10)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (\neg v1_xboole_0 (k3_cqc_lang X0)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 X2 X0 X1) \Rightarrow (m1_subset_1 X2 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (\neg v1_xboole_0 (k9_qc_lang1 X0)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1 X0) \wedge (m1_subset_1 X1 (k3_cqc_lang X0))) \Rightarrow (m2_subset_1 (k6_cqc_lang X0 X1) (k9_qc_lang1 X0) (k3_cqc_lang X0)) \quad (14)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (m1_subset_1 (k3_qc_lang1 X0) (k1_zfmisc_1 (k2_qc_lang1 X0))) \quad (15)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (m1_subset_1 (k3_cqc_lang X0) (k1_zfmisc_1 (k9_qc_lang1 X0))) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_qc_lang1 X0) \wedge ((m1_subset_1 X1 (k3_qc_lang1 X0)) \wedge (m1_subset_1 X2 (k3_cqc_lang X0)))) \Rightarrow (m2_subset_1 (k11_cqc_lang X0 X1 X2) (k9_qc_lang1 X0) (k3_cqc_lang X0)) \quad (17)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k2_qc_lang1 X0) (k3_qc_lang1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k9_qc_lang1 X0)) \Rightarrow (k5_qc_lang2 X0 X1 X2 = k13_qc_lang1 X0 (k15_qc_lang1 X0 X1 (k13_qc_lang1 X0 X2)))))) \quad (18)$$

Theorem 1

$$\forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_subset_1 X1 (k9_qc_lang1 X0) (k3_cqc_lang X0)) \Rightarrow (\forall X2.(m2_subset_1 X2 (k2_qc_lang1 X0) (k3_qc_lang1 X0)) \Rightarrow (\forall X3.(m2_finseq_1 X3 (k3_cqc_lang X0)) \Rightarrow ((r4_calcul_1 X0 (k8_finseq_1 (k3_cqc_lang X0) X3 (k12_finseq_1 (k3_cqc_lang X0) (k11_cqc_lang X0 X2 X1)))) \Leftrightarrow (r4_calcul_1 X0 (k8_finseq_1 (k3_cqc_lang X0) X3 (k12_finseq_1 (k3_cqc_lang X0) (k6_cqc_lang X0 (k12_cqc_lang X0 X2 (k6_cqc_lang X0 X1))))))))))$$