

t18_calcul_1
(TML6GC1qygyvhSx65fJvukRuYQGtSt27JuZ)

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Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_cqc_lang : \iota \Rightarrow \iota$ be given. Let $r2_xrelset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_calcul_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_cqc_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_calcul_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r10_calcul_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k2_valuat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m1_valuat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_valuat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r9_calcul_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 (k3_cqc_lang \\ X0)) \Rightarrow (\neg(\neg r1_xxreal_0 (k3_finseq_1 X1) np_1) \wedge (r1_xxreal_0 (\\ k3_finseq_1 (k1_calcul_1 (k3_cqc_lang X0) X1)) k6_numbers))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow (\\ \forall X2.(m2_funct_2 X2 (k3_qc_lang1 X0) X1 (k2_valuat_1 X0 X1)) \Rightarrow \\ (\forall X3.(m2_subset_1 X3 (k9_qc_lang1 X0) (k3_cqc_lang X0)) \Rightarrow \\ (\forall X4.(m1_valuat_1 X4 X0 X1) \Rightarrow ((r1_valuat_1 X0 X1 (k6_cqc_lang \\ X0 X3) X4 X2) \Leftrightarrow (\neg r1_valuat_1 X0 X1 X3 X4 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(\neg v1_xboole_0\ X1) \Rightarrow (\\ \forall X2.(m1_valuat_1\ X2\ X0\ X1) \Rightarrow (\forall X3.(m2_funct_2\ X3\ (\\ k3_qc_lang1\ X0)\ X1\ (k2_valuat_1\ X0\ X1)) \Rightarrow (\forall X4.(m2_finseq_1 \\ X4\ (k3_cqc_lang\ X0)) \Rightarrow ((\neg r1_xxreal_0\ (k3_finseq_1\ X4)\ k6_numbers) \Rightarrow \\ ((r9_calcul_1\ X0\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ X4)\ X1\ X2\ X3) \wedge (\\ r1_valuat_1\ X0\ X1\ (k2_calcul_1\ X0\ X4)\ X2\ X3)) \Leftrightarrow (r9_calcul_1\ X0\ X4 \\ X1\ X2\ X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1\ X2 \\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ X0\ X1)))) \Rightarrow ((r2_relset_1\ X0\ X1\ X2\ X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1\ X1\ X0) \Leftrightarrow (m1_finseq_1\ X1\ X0) \quad (5)$$

Assume the following.

$$\forall X0.(m1_qc_lang1\ X0) \Rightarrow (\neg v1_xboole_0\ (k3_cqc_lang\ X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m2_finseq_1\ X1\ X0) \Rightarrow ((v1_funct_1\ X1) \wedge (\\ (v1_finseq_1\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers \\ X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((m1_qc_lang1\ X0) \wedge (m1_finseq_1\ X1\ (k3_cqc_lang \\ X0))) \Rightarrow (m2_subset_1\ (k2_calcul_1\ X0\ X1)\ (k9_qc_lang1\ X0)\ (k3_cqc_lang \\ X0)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0\ X0) \wedge (m1_finseq_1\ X1\ X0)) \Rightarrow \\ (m2_finseq_1\ (k1_calcul_1\ X0\ X1)\ X0) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_finseq_1\ X1\ (k3_cqc_lang \\ X0)) \Rightarrow (\forall X2.(m2_subset_1\ X2\ (k9_qc_lang1\ X0)\ (k3_cqc_lang \\ X0)) \Rightarrow ((r10_calcul_1\ X0\ X1\ X2) \Leftrightarrow (\forall X3.(\neg v1_xboole_0\ X3) \Rightarrow \\ (\forall X4.(m1_valuat_1\ X4\ X0\ X3) \Rightarrow (\forall X5.(m2_funct_2\ X5 \\ (k3_qc_lang1\ X0)\ X3\ (k2_valuat_1\ X0\ X3)) \Rightarrow ((r9_calcul_1\ X0\ X1\ X3 \\ X4\ X5) \Rightarrow (r1_valuat_1\ X0\ X3\ X2\ X4\ X5)))))))))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_finseq_1\ X1\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_finseq_1\ X2\ (k3_cqc_lang\ X0)) \Rightarrow (((r2_reset_1\ k5_numbers\ (k3_cqc_lang\ X0)\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ X1))\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ X2)))) \wedge ((k6_cqc_lang\ X0\ (k2_calcul_1\ X0\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ X1)) = k2_calcul_1\ X0\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ X2)) \wedge ((k2_calcul_1\ X0\ X1 = k2_calcul_1\ X0\ X2) \wedge ((r10_calcul_1\ X0\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ X1)\ (k2_calcul_1\ X0\ X1)) \wedge (r10_calcul_1\ X0\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ X2)\ (k2_calcul_1\ X0\ X2)))))) \Rightarrow ((r1_xxreal_0\ (k3_finseq_1\ X1)\ np_1) \vee ((r1_xxreal_0\ (k3_finseq_1\ X2)\ np_1) \vee (r10_calcul_1\ X0\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ X1))\ (k2_calcul_1\ X0\ X1)))))) \end{aligned}$$