

t5_henmodel

(TMd9TgX68wHbFFPrmXkXP5YLsmkft427Mng)

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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 $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $r2_calcul_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_calcul_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_calcul_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_finseq_1\ X1\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_finseq_1\ X2\ (k3_cqc_lang\ X0)) \Rightarrow (r2_calcul_1\ X0\ X1\ (k8_finseq_1\ (k3_cqc_lang\ X0)\ X1\ X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_subset_1\ X1\ (k9_qc_lang1\ X0)\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_finseq_1\ X2\ (k3_cqc_lang\ X0)) \Rightarrow ((k2_calcul_1\ X0\ (k8_finseq_1\ (k3_cqc_lang\ X0)\ X2\ (k12_finseq_1\ (k3_cqc_lang\ X0)\ X1)) = X1) \wedge (r2_relset_1\ k5_numbers\ (k3_cqc_lang\ X0)\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ (k8_finseq_1\ (k3_cqc_lang\ X0)\ X2\ (k12_finseq_1\ (k3_cqc_lang\ X0)\ X1)))) X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.(m2_finseq_1\ X1\ (k3_cqc_lang\ X0)) \Rightarrow (\forall X2.(m2_finseq_1\ X2\ (k3_cqc_lang\ X0)) \Rightarrow (((r2_calcul_1\ X0\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ X1)\ (k1_calcul_1\ (k3_cqc_lang\ X0)\ X2)) \wedge ((k2_calcul_1\ X0\ X1 = k2_calcul_1\ X0\ X2) \wedge (r4_calcul_1\ X0\ X1))) \Rightarrow (r4_calcul_1\ X0\ X2)))) \end{aligned} \quad (3)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (6)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(\neg v1_xboole_0 (k3_cqc_lang X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (8)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(\neg v1_xboole_0 (k9_qc_lang1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_finseq_1 X1 X0)\wedge(m1_finseq_1 X2 X0))\Rightarrow(m2_finseq_1 (k8_finseq_1 X0 X1 X2) X0) \quad (10)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(m1_subset_1 (k3_cqc_lang X0) (k1_zfmisc_1 (k9_qc_lang1 X0))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_finseq_1 X1 X0))\Rightarrow(m2_finseq_1 (k1_calcul_1 X0 X1) X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow(m2_finseq_1 (k12_finseq_1 X0 X1) X0) \quad (13)$$

Theorem 1

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