

t16_henmodel (TMU- VXNQ2zYv7DLeSgc1wX3iGSsQGraWKTyn)

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Let $m1_qc_lang1 : \iota \Rightarrow o$ be given. Let $v1_henmodel : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k3_cqc_lang : \iota \Rightarrow \iota$ be given. Let $m1_henmodel : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_valuat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_henmodel : \iota \Rightarrow \iota$ be given. Let $k5_cqc_lang : \iota \Rightarrow \iota$ be given. Let $k3_henmodel : \iota \Rightarrow \iota$ be given. Let $r1_henmodel : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_qc_lang1 : \iota \Rightarrow \iota$ be given. Let $k2_valuat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_valuat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k6_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_qc_lang1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow (\\ \forall X2.(m2_funct_2 X2 (k3_qc_lang1 X0) X1 (k2_valuat_1 X0 X1)) \Rightarrow \\ (\forall X3.(m1_valuat_1 X3 X0 X1) \Rightarrow (r1_valuat_1 X0 X1 (k5_cqc_lang \\ X0) X3 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.r1_tarski k1_xboole_0 X0 \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_qc_lang1 X0) \Rightarrow (\forall X1.(m2_finseq_1 X1 (k3_cqc_lang \\ X0)) \Rightarrow (r4_calcul_1 X0 (k8_finseq_1 (k3_cqc_lang X0) X1 (k12_finseq_1 \\ (k3_cqc_lang X0) (k5_cqc_lang X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\exists X1.(m1_finseq_1 X1 X0)\wedge((v1_relat_1 X1)\wedge(v4_relat_1 X1 k5_numbers)\wedge((v5_relat_1 X1 X0)\wedge((v1_funct_1 X1)\wedge((v1_xboole_0 X1)\wedge((v1_finset_1 X1)\wedge(v1_finseq_1 X1)))))) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v1_xboole_0 (k10_xtuple_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.v1_xboole_0 (k6_finseq_1 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((m1_qc_lang1 X0)\wedge((v1_henmodel X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k3_cqc_lang X0)))))\Rightarrow(\forall X2.(m1_henmodel X2 X0 X1)\Rightarrow(m1_valuat_1 X2 X0 (k1_henmodel X0))) \quad (9)$$

Assume the following.

$$\forall X0.m2_finseq_1 (k6_finseq_1 X0) X0 \quad (10)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(m2_subset_1 (k5_cqc_lang X0) (k9_qc_lang1 X0) (k3_cqc_lang X0)) \quad (11)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(m2_funct_2 (k3_henmodel X0) (k3_qc_lang1 X0) (k1_henmodel X0) (k2_valuat_1 X0 (k1_henmodel X0))) \quad (12)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(\neg v1_xboole_0 (k1_henmodel X0)) \quad (13)$$

Assume the following.

$$\forall X0.(m1_qc_lang1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k3_cqc_lang X0)))\Rightarrow(\forall X2.(m2_subset_1 X2 (k9_qc_lang1 X0) (k3_cqc_lang X0))\Rightarrow((r1_henmodel X0 X1 X2)\Leftrightarrow(\exists X3.(m2_finseq_1 X3 (k3_cqc_lang X0))\wedge((r1_tarski (k2_relset_1 (k3_cqc_lang X0) X3) X1)\wedge(r4_calcul_1 X0 (k8_finseq_1 (k3_cqc_lang X0) X3) (k12_finseq_1 (k3_cqc_lang X0) X2)))))))) \quad (14)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_qc_lang1\ X0) \Rightarrow (\forall X1.((v1_henmodel\ X1\ X0) \wedge \\ (m1_subset_1\ X1\ (k1_zfmisc_1\ (k3_cqc_lang\ X0)))) \Rightarrow (\forall X2. \\ (m1_henmodel\ X2\ X0\ X1) \Rightarrow ((r1_valuat_1\ X0\ (k1_henmodel\ X0)\ (k5_cqc_lang \\ X0)\ X2\ (k3_henmodel\ X0)) \Leftrightarrow (r1_henmodel\ X0\ X1\ (k5_cqc_lang\ X0)))))) \end{aligned}$$