

t40_fomodel0
(TMU2abLm2QkZsHBAMVzvYsntnLne5pBgLKs)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k13_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k6_finseq_1 : \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_relat_1 X2) \wedge ((v5_relat_1 X2 X0) \wedge (v1_funct_1 X2))) \Rightarrow ((X1 \in k9_xtuple_0 X2) \Rightarrow (m1_subset_1 (k1_funct_1 X2 X1) X0)) \quad (3)$$

Assume the following.

$$\forall X0.k3_finseq_2 X0 = k13_finseq_1 X0 \quad (4)$$

Assume the following.

$$\forall X0.v1_xboole_0 (k6_finseq_1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k13_finseq_1 X0) \quad (6)$$

Assume the following.

$$\forall X0.m2_finseq_1 (k6_finseq_1 X0) X0 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ & ((X1 \in k9_xtuple_0 X0) \Rightarrow ((X2 = k1_funct_1 X0 X1) \Leftrightarrow (k4_tarski X1 X2 \in \\ & X0))) \wedge ((\neg X1 \in k9_xtuple_0 X0) \Rightarrow ((X2 = k1_funct_1 X0 X1) \Leftrightarrow (X2 = k1_xboole_0)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k13_finseq_1 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (m2_finseq_1 X2 X0)) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 \\ & X2)) \Rightarrow ((v5_relat_1 X2 (k3_finseq_2 X0)) \Rightarrow (k1_funct_1 X2 X1 \in k3_finseq_2 \\ & X0)) \end{aligned}$$