

t54_fomodel0 (TMFhBwK-
Abhv9XjK2J9VZU3zuC46BmMrLzEX)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ 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 $k8_fomodel0 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(\neg v1_xboole_0 X1) \Rightarrow (\forall X2.(\neg v1_xboole_0 \\ & X2) \Rightarrow (\forall X3.((v1_relat_1 X3) \wedge ((v1_funct_1 X3) \wedge (v1_finseq_1 \\ & X3))) \Rightarrow ((\neg(k1_funct_1 (k8_fomodel0 X1) X0 \neq k1_xboole_0) \wedge ((k1_funct_1 \\ & (k8_fomodel0 X2) X0 \neq k1_xboole_0) \wedge (k1_funct_1 (k8_fomodel0 X1) \\ & X0 \neq k1_funct_1 (k8_fomodel0 X2) X0))) \wedge (((v5_relat_1 X3 (k3_finseq_2 \\ & k1_xboole_0)) \Rightarrow (k1_funct_1 (k8_fomodel0 X1) X3 = k1_xboole_0)) \wedge \\ & (((k1_funct_1 (k8_fomodel0 X1) X3 = k1_xboole_0) \wedge (v5_relat_1 \\ & X3 (k3_finseq_2 X1))) \Rightarrow (v5_relat_1 X3 (k3_finseq_2 k1_xboole_0))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.r1_tarski k1_xboole_0 X0 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1_xboole_0 X0) \Rightarrow (v5_relat_1 (k1_funct_1 (k8_fomodel0 X0) X1) X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (6)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(\neg v1_xboole_0 X2)\Rightarrow((\exists X3. ((v1_relat_1 X3)\wedge((v1_funct_1 X3)\wedge(v1_finseq_1 X3)))\wedge((X0 = X3)\wedge(v5_relat_1 X3 (k3_finseq_2 X1))))\Rightarrow(v5_relat_1 (k1_funct_1 (k8_fomodel0 X2) X0) X1))$$