

l40_fomodel4
(TMNvcUJDRa6jMk3MsZFwF1ytrrLScVrjT5C)

October 27, 2020

Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $v11_fomodel1 : \iota \Rightarrow o$ be given. Let $l1_fomodel1 : \iota \Rightarrow o$ be given. Let $v1_fomodel4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_fomodel2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k15_fomodel1 : \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_fomodel0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_fomodel4 : \iota \Rightarrow \iota$ be given. Let $k33_fomodel2 : \iota \Rightarrow \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (k1_xtuple_0 (k4_tarski X0 X1) = X0) \wedge (k2_xtuple_0 (k4_tarski X0 X1) = X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X1)))) \Rightarrow (k1_domain_1 X0 X1 X2 X3 = k4_tarski X2 X3) \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v6_struct_0 X0) \wedge ((v11_fomodel1 X0) \wedge (l1_fomodel1 X0))) \Rightarrow (\neg v1_xboole_0 (k4_xboole_0 (k3_finseq_2 (k15_fomodel1 X0)) (k1_tarski k1_xboole_0))) \quad (5)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. m1_subset_1 (k14_fomodel0 X0 X1) (k1_zfmisc_1 X0) \quad (7)$$

Assume the following.

$$\forall X0. ((\neg v6_struct_0 X0) \wedge ((v11_fomodel1 X0) \wedge (l1_fomodel1 X0))) \Rightarrow (\forall X1. (v1_fomodel4 X1 X0) \Leftrightarrow (X1 \in k1_fomodel4 X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v6_struct_0 X0) \wedge ((v11_fomodel1 X0) \wedge (l1_fomodel1 X0))) \Rightarrow & (k1_fomodel4 X0 = \text{ReplSep2} (\text{toset} (\lambda X1 : \iota. m1_subset_1 \\ & X1 (k1_zfmisc_1 (k33_fomodel2 X0)))) (\lambda X1 : \iota. \text{toset} (\lambda X2 : \\ & \iota. (v4_fomodel2 X2 X0) \wedge (m2_subset_1 X2 (k3_finseq_2 (k15_fomodel1 \\ & X0)) (k6_subset_1 (k3_finseq_2 (k15_fomodel1 X0)) (k1_tarski \\ & k1_xboole_0)))))) (\lambda X1 : \iota. \lambda X2 : \iota. v1_finset_1 X1) (\lambda X1 : \\ & \iota. \lambda X2 : \iota. k1_domain_1 (k1_zfmisc_1 (k33_fomodel2 X0)) \\ & (k6_subset_1 (k3_finseq_2 (k15_fomodel1 X0)) (k1_tarski k1_xboole_0)) \\ & X1 X2)) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. k14_fomodel0 X0 X1 = k6_subset_1 X0 X1 \quad (10)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (11)$$

Theorem 1

$$\begin{aligned} \forall X0. ((\neg v6_struct_0 X0) \wedge ((v11_fomodel1 X0) \wedge (l1_fomodel1 X0))) \Rightarrow & (\forall X1. (v1_fomodel4 X1 X0) \Rightarrow ((v4_fomodel2 (k2_xtuple_0 \\ X1) X0) \wedge (m2_subset_1 (k2_xtuple_0 X1) (k3_finseq_2 (k15_fomodel1 \\ X0)) (k6_subset_1 (k3_finseq_2 (k15_fomodel1 X0)) (k1_tarski \\ k1_xboole_0)))))) \end{aligned}$$