

l34_fomodel2 (TMWiC- CBQqx7P3G1275q9fMebjuHbxnRrmmK)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_funct_5 : \iota \Rightarrow \iota$ be given. Let $k23_fomodel2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k16_fomodel2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k1_fomodel1 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k6_margrel1 : \iota$ 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 $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k37_fomodel1 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k22_fomodel2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $m2_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& ((\neg v6_struct_0 X1) \wedge ((v11_fomodel1 X1) \wedge (l1_fomodel1 X1))) \Rightarrow (\\
& \forall X2. (\neg v1_xboole_0 X2) \Rightarrow ((v1_funct_1 (k1_funct_5 (k8_nat_1 \\
& (k3_rfunct_3 (k8_mcart_1 (k9_funct_2 (k37_fomodel1 X1) (k3_rfunct_3 \\
& (k3_finseq_2 X2) (k2_xboole_0 X2 k6_margrel1))) (k3_finseq_2 \\
& (k1_fomodel1 X1)) (k16_fomodel2 X1 X2) (k6_subset_1 (k3_finseq_2 \\
& (k1_fomodel1 X1)) (k1_tarski k1_xboole_0))) k6_margrel1) (k22_fomodel2 \\
& X1 X2) X0)) \wedge ((v1_funct_2 (k1_funct_5 (k8_nat_1 (k3_rfunct_3 \\
& (k8_mcart_1 (k9_funct_2 (k37_fomodel1 X1) (k3_rfunct_3 (k3_finseq_2 \\
& X2) (k2_xboole_0 X2 k6_margrel1))) (k3_finseq_2 (k1_fomodel1 \\
& X1)) (k16_fomodel2 X1 X2) (k6_subset_1 (k3_finseq_2 (k1_fomodel1 \\
& X1)) (k1_tarski k1_xboole_0))) k6_margrel1) (k22_fomodel2 X1 \\
& X2) X0) (k16_fomodel2 X1 X2) (k3_rfunct_3 (k6_subset_1 (k3_finseq_2 \\
& (k1_fomodel1 X1)) (k1_tarski k1_xboole_0) k6_margrel1)) \wedge (m1_subset_1 \\
& (k1_funct_5 (k8_nat_1 (k3_rfunct_3 (k8_mcart_1 (k9_funct_2 (\\
& k37_fomodel1 X1) (k3_rfunct_3 (k3_finseq_2 X2) (k2_xboole_0 X2 \\
& k6_margrel1))) (k3_finseq_2 (k1_fomodel1 X1)) (k16_fomodel2 \\
& X1 X2) (k6_subset_1 (k3_finseq_2 (k1_fomodel1 X1)) (k1_tarski \\
& k1_xboole_0))) k6_margrel1) (k22_fomodel2 X1 X2) X0) (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k16_fomodel2 X1 X2) (k3_rfunct_3 (k6_subset_1 (\\
& k3_finseq_2 (k1_fomodel1 X1)) (k1_tarski k1_xboole_0) k6_margrel1))))))))) \\
& \tag{4}
\end{aligned}$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \tag{5}$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v6_struct_0 X0) \wedge ((v11_fomodel1 \\
& X0) \wedge (l1_fomodel1 X0))) \wedge ((v7_ordinal1 X1) \wedge (\neg v1_xboole_0 X2))) \Rightarrow \\
& (m2_rfunct_3 (k23_fomodel2 X0 X1 X2) (k8_mcart_1 (k9_funct_2 (\\
& k37_fomodel1 X0) (k3_rfunct_3 (k3_finseq_2 X2) (k2_xboole_0 X2 \\
& k6_margrel1))) (k3_finseq_2 (k1_fomodel1 X0)) (k16_fomodel2 \\
& X0 X2) (k6_subset_1 (k3_finseq_2 (k1_fomodel1 X0)) (k1_tarski \\
& k1_xboole_0))) k6_margrel1 (k3_rfunct_3 (k8_mcart_1 (k9_funct_2 \\
& (k37_fomodel1 X0) (k3_rfunct_3 (k3_finseq_2 X2) (k2_xboole_0 \\
& X2 k6_margrel1))) (k3_finseq_2 (k1_fomodel1 X0)) (k16_fomodel2 \\
& X0 X2) (k6_subset_1 (k3_finseq_2 (k1_fomodel1 X0)) (k1_tarski \\
& k1_xboole_0))) k6_margrel1)) \\
& \tag{7}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v6_struct_0 X0) \wedge ((v11_fomodel1 X0) \wedge (l1_fomodel1 \\
& X0))) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2.(\neg v1_xboole_0 \\
& X2) \Rightarrow (\forall X3.(m2_rfunct_3 X3 (k8_mcart_1 (k9_funct_2 (k37_fomodel1 \\
& X0) (k3_rfunct_3 (k3_finseq_2 X2) (k2_xboole_0 X2 k6_margrel1))) \\
& (k3_finseq_2 (k1_fomodel1 X0)) (k16_fomodel2 X0 X2) (k6_subset_1 \\
& (k3_finseq_2 (k1_fomodel1 X0)) (k1_tarski k1_xboole_0))) k6_margrel1 \\
& (k3_rfunct_3 (k8_mcart_1 (k9_funct_2 (k37_fomodel1 X0) (k3_rfunct_3 \\
& (k3_finseq_2 X2) (k2_xboole_0 X2 k6_margrel1))) (k3_finseq_2 \\
& (k1_fomodel1 X0)) (k16_fomodel2 X0 X2) (k6_subset_1 (k3_finseq_2 \\
& (k1_fomodel1 X0)) (k1_tarski k1_xboole_0))) k6_margrel1)) \Rightarrow (\\
& (X3 = k23_fomodel2 X0 X1 X2) \Leftrightarrow (\forall X4.(m2_subset_1 X4 k1_numbers \\
& k5_numbers) \Rightarrow ((X1 = X4) \Rightarrow (X3 = k8_nat_1 (k3_rfunct_3 (k8_mcart_1 \\
& (k9_funct_2 (k37_fomodel1 X0) (k3_rfunct_3 (k3_finseq_2 X2) (\\
& k2_xboole_0 X2 k6_margrel1))) (k3_finseq_2 (k1_fomodel1 X0)) \\
& (k16_fomodel2 X0 X2) (k6_subset_1 (k3_finseq_2 (k1_fomodel1 X0)) \\
& (k1_tarski k1_xboole_0))) k6_margrel1) (k22_fomodel2 X0 X2) X4))))))
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Leftrightarrow (X0 \in k4_ordinal1) \tag{9}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \tag{10}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((\neg v6_struct_0 X1) \wedge \\
& ((v11_fomodel1 X1) \wedge (l1_fomodel1 X1))) \Rightarrow (\forall X2.(\neg v1_xboole_0 \\
& X2) \Rightarrow ((v1_funct_1 (k1_funct_5 (k23_fomodel2 X1 X0 X2))) \wedge ((v1_funct_2 \\
& (k1_funct_5 (k23_fomodel2 X1 X0 X2)) (k16_fomodel2 X1 X2) (k3_rfunct_3 \\
& (k6_subset_1 (k3_finseq_2 (k1_fomodel1 X1)) (k1_tarski k1_xboole_0)) \\
& k6_margrel1)) \wedge (m1_subset_1 (k1_funct_5 (k23_fomodel2 X1 X0 X2)) \\
& (k1_zfmisc_1 (k2_zfmisc_1 (k16_fomodel2 X1 X2) (k3_rfunct_3 (\\
& k6_subset_1 (k3_finseq_2 (k1_fomodel1 X1)) (k1_tarski k1_xboole_0)) \\
& k6_margrel1))))))
\end{aligned}$$