

t15_fomodel4

(TMQquZoU2wD3CWDdYYWqu4D6ysb9QPyVZWu)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k9_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k1_fomodel4 : \iota \Rightarrow \iota$ be given. Let $v14_fomodel4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_fomodel2 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v8_fomodel4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k30_fomodel2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k31_fomodel2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_fomodel2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v6_struct_0 X0) \wedge ((v11_fomodel1 X0) \wedge (l1_fomodel1 \\
 & \quad X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k9_funct_2 (\\
 & \quad k9_setfam_1 (k1_fomodel4 X0)) (k9_setfam_1 (k1_fomodel4 X0)))) \Rightarrow \\
 & \quad (\forall X2. (v14_fomodel4 X2 X0 X1) \Leftrightarrow (\exists X3. ((v4_fomodel2 \\
 & \quad X3 X0) \wedge (m2_subset_1 X3 (k3_finseq_2 (k15_fomodel1 X0)) (k6_subset_1 \\
 & \quad (k3_finseq_2 (k15_fomodel1 X0)) (k1_tarski k1_xboole_0)))) \wedge \\
 & \quad (\exists X4. ((v4_fomodel2 X4 X0) \wedge (m2_subset_1 X4 (k3_finseq_2 \\
 & \quad (k15_fomodel1 X0)) (k6_subset_1 (k3_finseq_2 (k15_fomodel1 X0)) \\
 & \quad (k1_tarski k1_xboole_0)))) \wedge ((v8_fomodel4 X3 X0 X1 X2) \wedge (v8_fomodel4 \\
 & \quad (k30_fomodel2 X0 (k30_fomodel2 X0 (k31_fomodel2 X0 (k1_fomodel2 \\
 & \quad X0)) X3) X4) X0 X1 X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. \forall X3. (((\neg v6_struct_0 \\
 & \quad X0) \wedge ((v11_fomodel1 X0) \wedge (l1_fomodel1 X0))) \wedge ((m1_subset_1 X1 \\
 & \quad (k1_zfmisc_1 (k9_funct_2 (k9_setfam_1 (k1_fomodel4 X0)) (k9_setfam_1 \\
 & \quad (k1_fomodel4 X0)))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 X2)))) \Rightarrow (\forall X4. \\
 & \quad (v8_fomodel4 X4 X0 X1 X3) \Rightarrow (v8_fomodel4 X4 X0 X1 X2))
 \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v6_struct_0 X1) \wedge ((v11_fomodel1 X1) \wedge \\ & (l1_fomodel1 X1))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k9_funct_2 (k9_setfam_1 (k1_fomodel4 X1)) (k9_setfam_1 (k1_fomodel4 \\ & X1)))))) \Rightarrow (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 X0)) \Rightarrow ((v14_fomodel4 \\ & X3 X1 X2) \Rightarrow (v14_fomodel4 X0 X1 X2))) \end{aligned}$$