

t22_fomodel2 (TMKHm- sPye1LkMGqX8FTe17wvDVEKooUVjpi)

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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 $v4_fomodel1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_fomodel1 : \iota \Rightarrow \iota$ 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k32_fomodel2 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned}
& \forall X0.((\neg v6_struct_0 X0) \wedge ((v11_fomodel1 X0) \wedge (l1_fomodel1 \\
& X0))) \Rightarrow (\forall X1.((v4_fomodel2 X1 X0) \wedge (m2_subset_1 X1 (k3_finseq_2 \\
& (k15_fomodel1 X0)) (k6_subset_1 (k3_finseq_2 (k15_fomodel1 X0)) \\
& (k1_tarski k1_xboole_0)))) \Rightarrow (\forall X2.((v4_fomodel2 X2 X0) \wedge \\
& (m2_subset_1 X2 (k3_finseq_2 (k15_fomodel1 X0)) (k6_subset_1 \\
& (k3_finseq_2 (k15_fomodel1 X0)) (k1_tarski k1_xboole_0)))) \Rightarrow \\
& ((\neg r1_xxreal_0 (k32_fomodel2 X0 (k30_fomodel2 X0 (k30_fomodel2 \\
& X0 (k31_fomodel2 X0 (k1_fomodel2 X0) X1) X2)) (k32_fomodel2 X0 \\
& X1)) \wedge (\neg r1_xxreal_0 (k32_fomodel2 X0 (k30_fomodel2 X0 (k30_fomodel2 \\
& X0 (k31_fomodel2 X0 (k1_fomodel2 X0) X1) X2)) (k32_fomodel2 X0 \\
& X2))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v6_struct_0 X0) \wedge ((v11_fomodel1 X0) \wedge (l1_fomodel1 \\
& X0))) \Rightarrow (\forall X1.((v4_fomodel1 X1 X0) \wedge (m1_subset_1 X1 (k1_fomodel1 \\
& X0))) \Rightarrow (\forall X2.((v4_fomodel2 X2 X0) \wedge (m2_subset_1 X2 (k3_finseq_2 \\
& (k15_fomodel1 X0)) (k6_subset_1 (k3_finseq_2 (k15_fomodel1 X0)) \\
& (k1_tarski k1_xboole_0)))) \Rightarrow (\neg r1_xxreal_0 (k32_fomodel2 X0 (\\
& k30_fomodel2 X0 (k31_fomodel2 X0 X1) X2)) (k32_fomodel2 X0 X2))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v6_struct_0 X0) \wedge ((v11_fomodel1 X0) \wedge (l1_fomodel1 \\ & X0))) \Rightarrow (\forall X1.((v4_fomodel1 X1 X0) \wedge (m1_subset_1 X1 (k1_fomodel1 \\ & X0))) \Rightarrow (\forall X2.((v4_fomodel2 X2 X0) \wedge (m2_subset_1 X2 (k3_finseq_2 \\ & (k15_fomodel1 X0)) (k6_subset_1 (k3_finseq_2 (k15_fomodel1 X0)) \\ & (k1_tarski k1_xboole_0)))) \Rightarrow (\forall X3.((v4_fomodel2 X3 X0) \wedge \\ & (m2_subset_1 X3 (k3_finseq_2 (k15_fomodel1 X0)) (k6_subset_1 \\ & (k3_finseq_2 (k15_fomodel1 X0)) (k1_tarski k1_xboole_0)))) \Rightarrow \\ & ((\neg r1_xreal_0 (k32_fomodel2 X0 (k30_fomodel2 X0 (k31_fomodel2 \\ & X0 X1) X2)) (k32_fomodel2 X0 X2)) \wedge (\neg r1_xreal_0 (k32_fomodel2 \\ & X0 (k30_fomodel2 X0 (k30_fomodel2 X0 (k31_fomodel2 X0 (k1_fomodel2 \\ & X0)) X2) X3)) (k32_fomodel2 X0 X2)) \wedge (\neg r1_xreal_0 (k32_fomodel2 \\ & X0 (k30_fomodel2 X0 (k30_fomodel2 X0 (k31_fomodel2 X0 (k1_fomodel2 \\ & X0)) X2) X3)) (k32_fomodel2 X0 X3)))))) \end{aligned}$$