

t1_modelc_3

(TMKwPPBuvvwJsJtE9Cj9CYS3x66Vi7RGhJP)

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Let $v1_modelc_2 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_modelc_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_modelc_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k25_modelc_2 : \iota \Rightarrow \iota$ be given. Let $k43_modelc_2 : \iota$ be given. Let $u2_modelc_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_modelc_2 : \iota \Rightarrow o$ be given. Let $v3_modelc_2 : \iota \Rightarrow o$ be given. Let $v4_modelc_2 : \iota \Rightarrow o$ be given. Let $v6_modelc_2 : \iota \Rightarrow o$ be given. Let $r8_modelc_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k14_modelc_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_modelc_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
& \quad \quad \forall X2.((v1_modelc_3 X2 X1) \wedge (l1_modelc_3 X2 X1)) \Rightarrow (\forall X3. \\
& \quad \quad \quad (m1_subset_1 X3 (k25_modelc_2 k43_modelc_2)) \Rightarrow ((X0 \in u2_modelc_3 \\
& \quad \quad \quad X1 X2) \Rightarrow (((\neg v4_modelc_2 X0) \wedge (\neg v6_modelc_2 X0)) \vee ((r8_modelc_2 \\
& \quad \quad \quad X3 (k14_modelc_3 X1 X2)) \Leftrightarrow (r8_modelc_2 X3 (k14_modelc_3 X1 (k5_modelc_3 \\
& \quad \quad \quad X1 X2 X0)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
& \quad \forall X2.((v1_modelc_3 X2 X1) \wedge (l1_modelc_3 X2 X1)) \Rightarrow ((X0 \in u2_modelc_3 \\
& \quad \quad X1 X2) \Rightarrow (((\neg v2_modelc_2 X0) \wedge (\neg v3_modelc_2 X0)) \vee (k14_modelc_3 \\
& \quad \quad X1 X2 = k14_modelc_3 X1 (k5_modelc_3 X1 X2 X0))))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Rightarrow (\\
& \quad \forall X1.((v1_modelc_2 X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\
& \quad \quad \forall X2.((v1_modelc_3 X2 X1) \wedge (l1_modelc_3 X2 X1)) \Rightarrow (\forall X3. \\
& \quad \quad \quad (m1_subset_1 X3 (k25_modelc_2 k43_modelc_2)) \Rightarrow ((X0 \in u2_modelc_3 \\
& \quad \quad \quad X1 X2) \Rightarrow (((\neg v2_modelc_2 X0) \wedge ((\neg v3_modelc_2 X0) \wedge ((\neg v4_modelc_2 \\
& \quad \quad \quad X0) \wedge (\neg v6_modelc_2 X0)))) \vee ((r8_modelc_2 X3 (k14_modelc_3 X1 X2)) \Leftrightarrow \\
& \quad \quad \quad (r8_modelc_2 X3 (k14_modelc_3 X1 (k5_modelc_3 X1 X2 X0)))))))))
\end{aligned}$$