

t71_semi_af1

(TMQXzh9AUM8nCxQ2864qVKXpx86BvaHaedx)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_semi_af1 : \iota \Rightarrow o$ be given. Let $l1_analoaf : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_semi_af1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_semi_af1 X0) \wedge (l1_analoaf \\
& \quad X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\
& \quad (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
& \quad (\forall X5. (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6. (m1_subset_1 \\
& \quad X6 (u1_struct_0 X0)) \Rightarrow (((r3_semi_af1 X0 X1 X2 X3 X4) \wedge (r3_semi_af1 \\
& \quad X0 X2 X5 X4 X6)) \Rightarrow (r3_semi_af1 X0 X1 X5 X3 X6))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_semi_af1 X0) \wedge (l1_analoaf \\
& \quad X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\
& \quad (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
& \quad ((r3_semi_af1 X0 X1 X2 X3 X4) \Rightarrow ((r3_semi_af1 X0 X3 X4 X1 X2) \wedge ((r3_semi_af1 \\
& \quad X0 X2 X1 X4 X3) \wedge ((r3_semi_af1 X0 X1 X3 X2 X4) \wedge ((r3_semi_af1 X0 X4 X3 \\
& \quad X2 X1) \wedge ((r3_semi_af1 X0 X2 X4 X1 X3) \wedge ((r3_semi_af1 X0 X3 X1 X4 X2) \wedge \\
& \quad (r3_semi_af1 X0 X4 X2 X3 X1))))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v1_semi_af1 X0) \wedge (l1_analoaf \\
& \quad X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& \quad (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\
& \quad (u1_struct_0 X0)) \Rightarrow (\exists X4. (m1_subset_1 X4 (u1_struct_0 X0)) \wedge \\
& \quad (r3_semi_af1 X0 X1 X2 X3 X4))))))
\end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_semi_af1 X0) \wedge (l1_analoaf \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6.(m1_subset_1 \\ & X6 (u1_struct_0 X0)) \Rightarrow (((r3_semi_af1 X0 X1 X2 X3 X4) \wedge (r3_semi_af1 \\ & X0 X5 X2 X3 X6)) \Rightarrow (r3_semi_af1 X0 X1 X5 X6 X4)))))))))) \end{aligned}$$