

t7_dirort
(TMXAf2J7PT5oGxuQovt7qGg49ZpXou1pWoW)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_dirort : \iota \Rightarrow o$ 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 $r2_dirort : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_dirort X0) \wedge (l1_analoaf X0))) \Rightarrow \\
 & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
 & \quad X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
 & \quad X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow ((r2_dirort \\
 & \quad X0 X1 X2 X3 X4) \Leftrightarrow (\exists X5.(m1_subset_1 X5 (u1_struct_0 X0)) \wedge (\\
 & \quad \exists X6.(m1_subset_1 X6 (u1_struct_0 X0)) \wedge ((X5 \neq X6) \wedge (r2_analoaf \\
 & \quad X0 X5 X6 X1 X2) \wedge (r2_analoaf X0 X5 X6 X3 X4)))))))))) \quad (1)
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_analoaf X0)) \Rightarrow ((v1_dirort \\
& X0) \Leftrightarrow ((\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow ((r2_analoaf X0 \\
& X1 X1 X3 X5) \wedge ((r2_analoaf X0 X1 X3 X5 X5) \wedge ((\neg(r2_analoaf X0 X1 X3 X2 \\
& X4) \wedge ((r2_analoaf X0 X1 X3 X4 X2) \wedge ((X1 \neq X3) \wedge (X2 \neq X4)))) \wedge ((\neg(r2_analoaf \\
& X0 X1 X3 X2 X4) \wedge ((r2_analoaf X0 X1 X3 X2 X5) \wedge ((\neg r2_analoaf X0 X1 X3 \\
& X4 X5) \wedge (\neg r2_analoaf X0 X1 X3 X5 X4)))) \wedge (((r2_analoaf X0 X1 X3 X2 X4) \Rightarrow \\
& (r2_analoaf X0 X3 X1 X4 X2)) \wedge (((r2_analoaf X0 X1 X3 X2 X4) \wedge (r2_analoaf \\
& X0 X1 X3 X4 X5)) \Rightarrow (r2_analoaf X0 X1 X3 X2 X5)) \wedge (\neg(r2_analoaf X0 X1 X2 \\
& X3 X4) \wedge ((\neg r2_analoaf X0 X3 X4 X1 X2) \wedge (\neg r2_analoaf X0 X3 X4 X2 X1)))))))))) \wedge \\
& ((\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(\\
& m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (\exists X4.(m1_subset_1 X4 (u1_struct_0 X0)) \wedge \\
& ((X3 \neq X4) \wedge (r2_analoaf X0 X3 X4 X1 X2)))))) \wedge (\forall X1.(m1_subset_1 \\
& X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\exists X4. \\
& (m1_subset_1 X4 (u1_struct_0 X0)) \wedge ((X3 \neq X4) \wedge (r2_analoaf X0 X1 \\
& X2 X3 X4))))))))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_dirort X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X0)) \Rightarrow ((r2_dirort X0 X1 X2 X3 X3) \wedge (r2_dirort X0 X3 X3 X1 X2))))))
\end{aligned}$$