

l12_translac

(TMQC9PM8fUH2uNN3Ac3XSjM3aRmMyutW3LV)

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Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v1_diraf : \iota \Rightarrow o$ be given. Let $v2_diraf : \iota \Rightarrow o$ 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 $r1_aff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
 & \quad ((\neg \forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \forall X2. \\
 & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (X1 = X2))) \wedge ((\forall X1.(m1_subset_1 \\
 & \quad X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
 & \quad X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. \\
 & \quad (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 \\
 & \quad (u1_struct_0 X0)) \Rightarrow (\forall X6.(m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow \\
 & ((r2_analoaf X0 X1 X2 X2 X1) \wedge ((r2_analoaf X0 X1 X2 X3 X3) \wedge (((r2_analoaf \\
 & X0 X1 X2 X3 X4) \wedge (r2_analoaf X0 X1 X2 X5 X6)) \Rightarrow ((X1 = X2) \vee (r2_analoaf \\
 & X0 X3 X4 X5 X6)))) \wedge ((r2_analoaf X0 X1 X2 X1 X3) \Rightarrow (r2_analoaf X0 X2 X1 \\
 & \quad X2 X3)))))) \wedge ((\neg \forall X1.(m1_subset_1 X1 (u1_struct_0 \\
 & \quad 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_analoaf X0 X1 X2 X1 X3)))) \wedge \\
 & \quad ((\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 \\
 & ((r2_analoaf X0 X1 X3 X2 X4) \wedge (X2 \neq X4)))))) \wedge ((\forall X1.(m1_subset_1 \\
 & \quad X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
 & \quad X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\exists X4. \\
 & (m1_subset_1 X4 (u1_struct_0 X0)) \wedge ((r2_analoaf X0 X1 X2 X3 X4) \wedge \\
 & (r2_analoaf X0 X1 X3 X2 X4)))))) \wedge ((\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
 & \quad 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 (\neg (r2_analoaf X0 X3 X1 X1 X4) \wedge ((X1 \neq X3) \wedge (\forall X5. \\
 & (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\neg (r2_analoaf X0 X2 X1 X1 X5) \wedge \\
 & (r2_analoaf X0 X2 X3 X4 X5)))))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\neg(X1 \neq X2) \wedge (\forall X3.(m1_subset_1 X3 (\\ & u1_struct_0 X0)) \Rightarrow (r1_aff_1 X0 X1 X2 X3)))))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge ((v2_diraf X0) \wedge \\ & (l1_analoaf X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg(X1 \neq X2) \wedge (\forall X4.(m1_subset_1 \\ & X4 (u1_struct_0 X0)) \Rightarrow ((\neg(\neg r1_aff_1 X0 X1 X2 X3) \wedge ((r2_analoaf X0 \\ & X1 X2 X3 X4) \wedge (r2_analoaf X0 X1 X3 X2 X4))) \wedge (\neg(r1_aff_1 X0 X1 X2 X3) \wedge \\ & (\exists X5.(m1_subset_1 X5 (u1_struct_0 X0)) \wedge (\exists X6.(m1_subset_1 \\ & X6 (u1_struct_0 X0)) \wedge (\neg r1_aff_1 X0 X1 X2 X5) \wedge ((r2_analoaf X0 X1 \\ & X2 X5 X6) \wedge ((r2_analoaf X0 X1 X5 X2 X6) \wedge ((r2_analoaf X0 X5 X6 X3 X4) \wedge \\ & (r2_analoaf X0 X5 X3 X6 X4)))))))))))))) \end{aligned}$$