

t60_aff_1

(TMdwe1NzgiNYZU2NxgAfZpk15kSmPY7hUTk)

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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 $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_aff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given.

Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_analoaf X0)) \Rightarrow (((\neg v7_struct_0 \\
& X0) \wedge ((v1_diraf X0) \wedge ((v2_diraf X0) \wedge (l1_analoaf X0)))) \Leftrightarrow ((\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 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 ((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 X2 X3))))))))) \wedge \\
& ((\neg \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_analoaf X0 X1 X2 X1 X3)))) \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 ((r2_analoaf X0 \\
& X1 X3 X2 X4) \wedge (X2 \neq X4)))))) \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 ((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 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))))))))) \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 (\forall X4. (m1_subset_1 X4 \\
& (u1_struct_0 X0)) \Rightarrow (\neg (\neg r2_analoaf X0 X1 X2 X3 X4) \wedge (\forall X5. (\\
& m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\neg (r2_analoaf X0 X1 X2 X1 X5) \wedge \\
& (r2_analoaf X0 X3 X4 X3 X5))))))))))))) \wedge \\
& \hspace{15em} (1)
\end{aligned}$$

Assume the following.

$$\forall X0. (l1_analoaf X0) \Rightarrow (l1_struct_0 X0) \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 \\
& X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 \\
& X0)) \Rightarrow ((r1_aff_1 X0 X1 X2 X3) \Leftrightarrow (r2_analoaf X0 X1 X2 X1 X3)))))) \\
& \hspace{15em} (3)
\end{aligned}$$

Assume the following.

$$\forall X0. (l1_struct_0 X0) \Rightarrow ((v2_struct_0 X0) \Rightarrow (v7_struct_0 X0)) \tag{4}$$

Theorem 1

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