

l11_homothet

(TMZdiQ6uB5gy8Zgu2MnnwFjAWXaF3igdbYD)

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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.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow ((r1_aff_1 X0 X1 X2 X3) \Rightarrow ((r1_aff_1 X0 X1 X3 X2) \wedge ((r1_aff_1 \\ & X0 X2 X1 X3) \wedge ((r1_aff_1 X0 X2 X3 X1) \wedge ((r1_aff_1 X0 X3 X1 X2) \wedge (r1_aff_1 \\ & X0 X3 X2 X1)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge ((v2_diraf X0) \wedge \\ & (l1_analoaf X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow \\ & ((r1_aff_1 X0 X1 X2 X3) \Rightarrow ((X1 = X2) \vee ((X1 = X3) \vee (((\neg(\neg r1_aff_1 X0 X1 \\ & X2 X4) \wedge (r1_aff_1 X0 X1 X4 X5) \wedge (r2_analoaf X0 X2 X4 X3 X5))) \wedge (\neg(r1_aff_1 \\ & X0 X1 X2 X4) \wedge (\exists X6.(m1_subset_1 X6 (u1_struct_0 X0)) \wedge (\exists X7. \\ & (m1_subset_1 X7 (u1_struct_0 X0)) \wedge ((\neg r1_aff_1 X0 X1 X2 X6) \wedge ((r1_aff_1 \\ & X0 X1 X6 X7) \wedge ((r2_analoaf X0 X2 X6 X3 X7) \wedge ((r2_analoaf X0 X6 X4 X7 X5) \wedge \\ & (r1_aff_1 X0 X1 X2 X5)))))))))) \vee ((X1 \neq X3) \wedge ((X1 \neq X2) \wedge ((r1_aff_1 \\ & X0 X1 X3 X2) \wedge (((\neg r1_aff_1 X0 X1 X3 X5) \wedge ((r1_aff_1 X0 X1 X5 X4) \wedge (r2_analoaf \\ & X0 X3 X5 X2 X4))) \vee ((r1_aff_1 X0 X1 X3 X5) \wedge (\exists X6.(m1_subset_1 \\ & X6 (u1_struct_0 X0)) \wedge (\exists X7.(m1_subset_1 X7 (u1_struct_0 \\ & X0)) \wedge ((\neg r1_aff_1 X0 X1 X3 X6) \wedge ((r1_aff_1 X0 X1 X6 X7) \wedge ((r2_analoaf \\ & X0 X3 X6 X2 X7) \wedge ((r2_analoaf X0 X6 X5 X7 X4) \wedge (r1_aff_1 X0 X1 X3 X4)))))))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge ((v2_diraf X0) \wedge \\
& (l1_analoaf X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& (u1_struct_0 X0)) \Rightarrow (\neg(X1 \neq X2) \wedge ((r1_aff_1 X0 X1 X2 X3) \wedge (\forall X5. \\
& (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow ((\neg(\neg r1_aff_1 X0 X1 X2 X4) \wedge \\
& (r1_aff_1 X0 X1 X4 X5) \wedge (r2_analoaf X0 X2 X4 X3 X5))) \wedge (\neg(r1_aff_1 \\
& X0 X1 X2 X4) \wedge (\exists X6.(m1_subset_1 X6 (u1_struct_0 X0)) \wedge (\exists X7. \\
& (m1_subset_1 X7 (u1_struct_0 X0)) \wedge (\neg r1_aff_1 X0 X1 X2 X6) \wedge ((r1_aff_1 \\
& X0 X1 X6 X7) \wedge ((r2_analoaf X0 X2 X6 X3 X7) \wedge ((r2_analoaf X0 X6 X4 X7 X5) \wedge \\
& (r1_aff_1 X0 X1 X2 X5)))))))))))))))))
\end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge ((v2_diraf X0) \wedge \\
& (l1_analoaf X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& (u1_struct_0 X0)) \Rightarrow (\neg(X1 \neq X2) \wedge ((X1 \neq X3) \wedge ((r1_aff_1 X0 X1 X2 X3) \wedge \\
& (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow ((\neg(\neg r1_aff_1 \\
& X0 X1 X2 X5) \wedge (r1_aff_1 X0 X1 X5 X4) \wedge (r2_analoaf X0 X2 X5 X3 X4))) \wedge \\
& (\neg(r1_aff_1 X0 X1 X2 X5) \wedge (\exists X6.(m1_subset_1 X6 (u1_struct_0 \\
& X0)) \wedge (\exists X7.(m1_subset_1 X7 (u1_struct_0 X0)) \wedge (\neg r1_aff_1 \\
& X0 X1 X2 X6) \wedge (r1_aff_1 X0 X1 X6 X7) \wedge ((r2_analoaf X0 X2 X6 X3 X7) \wedge \\
& (r2_analoaf X0 X6 X5 X7 X4) \wedge (r1_aff_1 X0 X1 X2 X4)))))))))))))))))
\end{aligned}$$