

t48_afproj

(TMTX52krZxDXaVwWGcSCSAXFKmgFMyrdbpm)

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Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v1_diraf : \iota \Rightarrow o$ be given. Let $l1_analoaf : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_aff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5. \\
& (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6.(m1_subset_1 X6 \\
& (k1_zfmisc_1 (u1_struct_0 X0)) \Rightarrow (\forall X7.(m1_subset_1 X7 \\
& (k1_zfmisc_1 (u1_struct_0 X0)) \Rightarrow (((X1 \in X6) \wedge ((X1 \in X7) \wedge ((X2 \in X6) \wedge \\
& ((X3 \in X6) \wedge ((X4 \in X7) \wedge ((X5 \in X7) \wedge ((v1_aff_1 X6 X0) \wedge ((v1_aff_1 X7 \\
& X0) \wedge (X2 = X3)))))))))) \Rightarrow ((X1 = X2) \vee ((X1 = X4) \vee ((X6 = X7) \vee (((\neg r2_analoaf \\
& X0 X2 X4 X3 X5) \wedge (\neg r2_analoaf X0 X4 X2 X5 X3)) \vee (X4 = X5))))))))))
\end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((r2_analoaf X0 X1 X2 X2 X1) \wedge (r2_analoaf X0 \\ & X1 X2 X1 X2)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (\neg(v1_aff_1 X3 X0) \wedge ((v1_aff_1 X4 X0) \wedge ((X1 \in \\ & X3) \wedge ((X2 \in X3) \wedge ((X1 \in X4) \wedge ((X2 \in X4) \wedge ((X1 \neq X2) \wedge (X3 \neq X4)))))))))))))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 \\ & X4 (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X6.(m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow (\forall X7. \\ & (m1_subset_1 X7 (u1_struct_0 X0)) \Rightarrow (\forall X8.(m1_subset_1 X8 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X9.(m1_subset_1 X9 (u1_struct_0 X0)) \Rightarrow \\ & (((v1_aff_1 X1 X0) \wedge ((v1_aff_1 X2 X0) \wedge ((X3 \in X1) \wedge ((X3 \in X2) \wedge ((X5 \in \\ & X1) \wedge ((X6 \in X1) \wedge ((X7 \in X2) \wedge ((X8 \in X2) \wedge ((X9 \in X2) \wedge ((r2_analoaf X0 X4 \\ & X8 X5 X7) \wedge (r2_analoaf X0 X5 X9 X6 X8)))))))))))))) \Rightarrow ((X1 = X2) \vee ((X3 = \\ & X5) \vee ((X3 = X8) \vee ((X3 = X9) \vee (((X4 \neq X5) \wedge ((X5 \neq X6) \wedge (X4 \neq X6))) \vee (r2_analoaf \\ & X0 X4 X9 X6 X7)))))))))))))) \end{aligned}$$