

t8_afvect01 (TMQHZkUKYS-
nUN7asUNUo9D2tEnWnjCjNtre)

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Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v1_afvect01 : \iota \Rightarrow o$ 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 $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v7_struct_0 X0) \wedge ((v1_afvect01 X0) \wedge (l1_analoaf \\ &X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ &(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\ &(u1_struct_0 X0)) \Rightarrow ((r2_analoaf X0 X1 X2 X3 X3) \Rightarrow (X1 = X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (l1_analoaf X0) \Rightarrow (l1_struct_0 X0) \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_analoaf X0)) \Rightarrow ((v1_afvect01 \\
& \quad X0) \Leftrightarrow ((\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 \\
& \quad ((\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 X1 X1) \Rightarrow (\\
& \quad 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 X5 X6) \wedge (r2_analoaf \\
& X0 X3 X4 X5 X6)) \Rightarrow (r2_analoaf X0 X1 X2 X3 X4)))))) \wedge ((\forall X1. \\
& (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\
& (u1_struct_0 X0)) \Rightarrow (\exists X3.(m1_subset_1 X3 (u1_struct_0 X0)) \wedge \\
& (r2_analoaf X0 X1 X3 X3 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 \\
& (((r2_analoaf X0 X5 X1 X5 X2) \wedge (r2_analoaf X0 X5 X3 X5 X4)) \Rightarrow ((X1 = X2) \vee \\
& ((X3 = X4) \vee (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 (\neg(X1 \neq X2) \wedge (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\
& ((\neg(X1 \neq X3) \wedge (r2_analoaf X0 X1 X2 X2 X3)) \wedge (\forall X4.(m1_subset_1 \\
& X4 (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 \\
& X0)) \Rightarrow (\neg(X4 \neq X5) \wedge ((r2_analoaf X0 X1 X2 X4 X5) \wedge ((r2_analoaf X0 X1 \\
& X4 X4 X2) \wedge (r2_analoaf X0 X1 X5 X5 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 X6) \wedge ((r2_analoaf X0 X2 X3 X4 X5) \wedge ((r2_analoaf \\
& X0 X2 X4 X4 X3) \wedge (r2_analoaf X0 X2 X5 X5 X3)))) \Rightarrow (r2_analoaf X0 X1 X3 \\
& X3 X6)))))) \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(X1 \neq X4) \wedge ((X2 \neq X3) \wedge ((r2_analoaf X0 X1 X2 X2 X4) \wedge ((r2_analoaf \\
& X0 X1 X3 X3 X4) \wedge (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\\
& \quad \forall X6.(m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow (\neg(X5 \neq X6) \wedge ((r2_analoaf \\
& X0 X2 X3 X5 X6) \wedge ((r2_analoaf X0 X2 X5 X5 X3) \wedge (r2_analoaf X0 X2 X6 X6 \\
& 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 (\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 (\neg(r2_analoaf X0 X1 X2 X4 X5) \wedge ((r2_analoaf X0 \\
& X1 X3 X6 X7) \wedge ((r2_analoaf X0 X1 X4 X4 X2) \wedge ((r2_analoaf X0 X1 X6 X6 X3) \wedge \\
& ((r2_analoaf X0 X1 X5 X5 X2) \wedge ((r2_analoaf X0 X1 X7 X7 X3) \wedge (\forall X8. \\
& (m1_subset_1 X8 (u1_struct_0 X0)) \Rightarrow (\forall X9.(m1_subset_1 X9 \\
& (u1_struct_0 X0)) \Rightarrow (\neg(r2_analoaf X0 X2 X3 X8 X9) \wedge ((r2_analoaf X0 \\
& X2 X8 X8 X3) \wedge (r2_analoaf X0 X2 X9 X9 X3)))))) \wedge (r2_analoaf X0 X2 X9 X9 X3)))))) \wedge (3)
\end{aligned}$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow ((v2_struct_0 X0) \Rightarrow (v7_struct_0 X0)) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_afvect01 X0) \wedge (l1_analoaf \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\ & (\neg(r2_analoaf X0 X1 X2 X1 X3) \wedge ((r2_analoaf X0 X1 X4 X1 X3) \wedge ((X4 \neq X2) \wedge \\ & ((X4 \neq X3) \wedge (X2 \neq X3)))))))))) \end{aligned}$$