

t9_aff_4

(TMWCUW7Fdd5yqjQGSPNVk2A1JSSBmqLymAE)

October 27, 2020

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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5. \\ & ((v1_aff_1 X5 X0) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow \\ & (((X1 \in X5) \wedge ((X2 \in X5) \wedge ((X3 \in X5) \wedge (r2_analoaf X0 X1 X2 X3 X4)))) \Rightarrow (\\ & (X1 = X2) \vee (X4 \in X5)))))) \end{aligned} \quad (3)$$

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 \\
& 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 \\
& \quad ((\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)))))))))))))
\end{aligned} \tag{4}$$

Assume the following.

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

Theorem 1

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