

t9_conmetr1

(TMXaR98T45CCNKTqMN2Xm3iwf1NuzwUXpEg)

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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 $v13_aff_2 : \iota \Rightarrow o$ be given. Let $v5_conmetr1 : \iota \Rightarrow o$ 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 $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5_aff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_aff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_aff_1 : \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0. ((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 \\ & X3 (k1_zfmisc_1 (u1_struct_0 X0)) \Rightarrow (((r5_aff_1 X0 X2 X3) \wedge ((X1 \in \\ & X2) \wedge (X1 \in X3))) \Rightarrow (X2 = X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & ((r3_aff_1 X0 X1 X2) \Rightarrow ((v1_aff_1 X1 X0) \wedge (v1_aff_1 X2 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((r2_analoaf X0 X1 X2 X2 X1) \wedge (r2_analoaf X0 \\ & X1 X2 X1 X2)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v7_struct_0 X0) \wedge ((v1_diraf \\ & X0) \wedge (l1_analoaf X0))) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))))) \Rightarrow ((r5_aff_1 \\ & X0 X1 X2) \Leftrightarrow (r3_aff_1 X0 X1 X2)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge ((v2_diraf X0) \wedge \\ & (l1_analoaf X0)))) \Rightarrow ((v5_conmetr1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. \\ & (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X6.(m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X7.(m1_subset_1 X7 (u1_struct_0 X0)) \Rightarrow (\forall X8.(m1_subset_1 \\ & X8 (u1_struct_0 X0)) \Rightarrow (\forall X9.(m1_subset_1 X9 (k1_zfmisc_1 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X10.(m1_subset_1 X10 (k1_zfmisc_1 \\ & (u1_struct_0 X0)) \Rightarrow (((r5_aff_1 X0 X9 X10) \wedge ((X1 \in X9) \wedge ((X3 \in X9) \wedge \\ & ((X6 \in X9) \wedge ((X8 \in X9) \wedge ((X2 \in X10) \wedge ((X4 \in X10) \wedge ((X5 \in X10) \wedge ((X7 \in X10) \wedge \\ & ((r2_analoaf X0 X3 X2 X7 X6) \wedge (r2_analoaf X0 X2 X1 X6 X5) \wedge (r2_analoaf \\ & X0 X1 X4 X5 X8)))))))))) \Rightarrow ((X4 \in X9) \vee ((X2 \in X9) \vee ((X5 \in X9) \vee ((X7 \in \\ & X9) \vee ((X1 \in X10) \vee ((X3 \in X10) \vee ((X6 \in X10) \vee ((X8 \in X10) \vee (r2_analoaf \\ & X0 X3 X4 X7 X8)))))))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & ((v13_aff_2 X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. \\ & (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X6.(m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X7.(m1_subset_1 X7 (u1_struct_0 X0)) \Rightarrow (\forall X8.(m1_subset_1 \\ & X8 (u1_struct_0 X0)) \Rightarrow (((v1_aff_1 X1 X0) \wedge ((v1_aff_1 X2 X0) \wedge ((X3 \in \\ & X1) \wedge ((X4 \in X1) \wedge ((X5 \in X1) \wedge ((r5_aff_1 X0 X1 X2) \wedge ((X6 \in X2) \wedge ((X7 \in X2) \wedge \\ & ((X8 \in X2) \wedge ((r2_analoaf X0 X3 X7 X4 X6) \wedge (r2_analoaf X0 X4 X8 X5 X7)))))))))) \Rightarrow \\ & ((X1 = X2) \vee (r2_analoaf X0 X3 X8 X5 X6)))))))))) \end{aligned} \quad (8)$$

Theorem 1

$$\forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge ((v2_diraf X0) \wedge (l1_analoaf X0)))) \Rightarrow ((v13_aff_2 X0) \Leftrightarrow (v5_conmetr1 X0))$$