

l31_homothet (TM-
NPTd69vnuGKDhJSUKvCCzhZYbXNu1jA3M)

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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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r2_aff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_aff_2 : \iota \Rightarrow o$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\begin{aligned} & \forall X0. ((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X0)) \Rightarrow (\neg(r2_aff_1 X0 X1 X2 X3) \wedge ((\neg X1 \in X3) \wedge (X2 \in X3))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X0)) \Rightarrow ((r2_aff_1 X0 X1 X2 X3) \Rightarrow (r2_aff_1 X0 X2 X1 X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge ((v2_diraf X0) \wedge \\
& (l1_analoaf X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X6.(m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow (\forall X7.(m1_subset_1 \\
& X7 (u1_struct_0 X0)) \Rightarrow (\forall X8.(m1_subset_1 X8 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X9.(m1_subset_1 X9 (u1_struct_0 X0)) \Rightarrow (\forall X10. \\
& (m1_subset_1 X10 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((r2_aff_1 \\
& X0 X1 X2 X10) \wedge ((v7_aff_2 X0) \wedge ((X4 \in X10) \wedge ((X5 \in X10) \wedge ((r2_analoaf \\
& X0 X4 X1 X5 X3) \wedge ((r2_analoaf X0 X4 X2 X5 X6) \wedge ((r2_aff_1 X0 X3 X6 X10) \wedge \\
& ((X7 \in X10) \wedge ((X8 \in X10) \wedge ((r2_analoaf X0 X7 X1 X8 X3) \wedge ((r2_aff_1 X0 \\
& X3 X9 X10) \wedge (r2_analoaf X0 X7 X2 X8 X9)))))))))) \Rightarrow ((X1 \in X10) \vee ((\\
& X3 \in X10) \vee (X9 = X6))))))))))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge ((v2_diraf X0) \wedge \\
& (l1_analoaf X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X6.(m1_subset_1 X6 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (((r2_aff_1 X0 X1 X2 X6) \wedge (v7_aff_2 X0)) \Rightarrow ((X1 \in X6) \vee (((\neg(X3 \in X6) \wedge \\
& (X3 = X4)) \wedge (\neg(\neg X3 \in X6) \wedge (\exists X7.(m1_subset_1 X7 (u1_struct_0 \\
& X0)) \wedge (\exists X8.(m1_subset_1 X8 (u1_struct_0 X0)) \wedge ((X7 \in X6) \wedge \\
& ((X8 \in X6) \wedge ((r2_analoaf X0 X7 X1 X8 X3) \wedge ((r2_analoaf X0 X7 X2 X8 X4) \wedge \\
& (r2_aff_1 X0 X3 X4 X6)))))))))) \vee (((\neg(X5 \in X6) \wedge (X5 = X4)) \wedge (\neg(\neg X5 \in \\
& X6) \wedge (\exists X7.(m1_subset_1 X7 (u1_struct_0 X0)) \wedge (\exists X8. \\
& (m1_subset_1 X8 (u1_struct_0 X0)) \wedge ((X7 \in X6) \wedge ((X8 \in X6) \wedge ((r2_analoaf \\
& X0 X7 X1 X8 X5) \wedge ((r2_analoaf X0 X7 X2 X8 X4) \wedge (r2_aff_1 X0 X5 X4 X6)))))))))) \vee \\
& (X3 = X5))))))))))
\end{aligned}$$