

t64_aff_4

(TMMVB4dyLEiFHEjcmqZe276ZscVoGvRJVsF)

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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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_aff_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_aff_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r5_aff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_aff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_aff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
 & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
 & \quad X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
 & \quad \quad X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5. \\
 & \quad \quad \quad (m1_subset_1 X5 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X6. \\
 & \quad \quad \quad \quad (m1_subset_1 X6 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X7. \\
 & \quad \quad \quad \quad \quad (m1_subset_1 X7 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((v1_aff_4 \\
 & \quad \quad \quad \quad \quad \quad X5 X0) \wedge ((v1_aff_4 X6 X0) \wedge (v1_aff_4 X7 X0) \wedge ((r1_aff_4 X0 X5 X6) \wedge \\
 & \quad \quad \quad \quad \quad \quad ((X1 \in k9_subset_1 (u1_struct_0 X0) X5 X7) \wedge ((X2 \in k9_subset_1 (u1_struct_0 \\
 & \quad \quad \quad \quad \quad \quad X0) X5 X7) \wedge ((X3 \in k9_subset_1 (u1_struct_0 X0) X6 X7) \wedge (X4 \in k9_subset_1 \\
 & \quad \quad \quad \quad \quad \quad (u1_struct_0 X0) X6 X7)))))))))) \Rightarrow ((X5 = X6) \vee (r2_analoaf X0 X1 X2 X3 \\
 & \quad \quad \quad \quad \quad \quad X4)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
 & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
 & \quad X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
 & \quad \quad X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5. \\
 & \quad \quad \quad ((v1_aff_1 X5 X0) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow \\
 & \quad \quad \quad (\forall X6.((v1_aff_1 X6 X0) \wedge (m1_subset_1 X6 (k1_zfmisc_1 (u1_struct_0 \\
 & \quad \quad \quad X0)))) \Rightarrow (((X1 \in X5) \wedge ((X2 \in X5) \wedge ((X3 \in X6) \wedge (X4 \in X6)))) \Rightarrow ((X1 = X2) \vee \\
 & \quad \quad \quad ((X3 = X4) \vee ((r3_aff_1 X0 X5 X6) \Leftrightarrow (r2_analoaf X0 X1 X2 X3 X4))))))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\
& (u1_struct_0 X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 \\
& (u1_struct_0 X0))) \Rightarrow (((v1_aff_4 X3 X0) \wedge ((v1_aff_4 X4 X0) \wedge ((X1 \in \\
& X3) \wedge ((X2 \in X3) \wedge ((X1 \in X4) \wedge (X2 \in X4)))))) \Rightarrow ((X3 = X4) \vee ((X1 = X2) \vee (v1_aff_1 \\
& (k9_subset_1 (u1_struct_0 X0) X3 X4) X0))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((\neg v7_struct_0 X0) \wedge ((v1_diraf \\
& X0) \wedge (l1_analoaf X0))) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\
& X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow ((r5_aff_1 \\
& X0 X1 X2) \Leftrightarrow (r3_aff_1 X0 X1 X2))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (((v1_aff_4 X1 X0) \wedge ((v1_aff_4 X2 X0) \wedge (r1_aff_4 X0 X1 X2))) \Rightarrow ((X1 = \\
& X2) \vee (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg (X3 \in X1) \wedge \\
& (X3 \in X2))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (m1_subset_1 (k9_subset_1 X0 X1 X2) (k1_zfmisc_1 X0)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (k9_subset_1 X0 X1 X2 = k9_subset_1 X0 X2 X1) \tag{9}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5. \\ & (m1_subset_1 X5 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X6. \\ & (m1_subset_1 X6 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X7. \\ & (m1_subset_1 X7 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((v1_aff_4 \\ & X5 X0) \wedge ((v1_aff_4 X6 X0) \wedge ((v1_aff_4 X7 X0) \wedge ((r1_aff_4 X0 X5 X6) \wedge \\ & ((X1 \in k9_subset_1 (u1_struct_0 X0) X5 X7) \wedge ((X2 \in k9_subset_1 (u1_struct_0 \\ & X0) X5 X7) \wedge ((X3 \in k9_subset_1 (u1_struct_0 X0) X6 X7) \wedge (X4 \in k9_subset_1 \\ & (u1_struct_0 X0) X6 X7)))))))))) \Rightarrow ((X5 = X6) \vee ((X1 = X2) \vee ((X3 = X4) \vee \\ & (r5_aff_1 X0 (k9_subset_1 (u1_struct_0 X0) X5 X7) (k9_subset_1 \\ & (u1_struct_0 X0) X6 X7)))))))))) \end{aligned}$$