

l56_afproj

(TMHJWUHKXYD37Ue7AYvYUa5fGbgaqAsMJ4b)

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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 $u1_incsp_1 : \iota \Rightarrow \iota$ be given. Let $k13_afproj : \iota \Rightarrow \iota$ be given. Let $u2_incsp_1 : \iota \Rightarrow \iota$ be given. Let $r1_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_aff_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_aff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_aff_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5_aff_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_afproj : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_afproj : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (((r1_aff_4 X0 X1 X3) \wedge (r1_aff_4 X0 X1 X4) \wedge (r1_aff_4 X0 X2 X3) \wedge \\
& ((r1_aff_4 X0 X2 X4) \wedge ((v1_aff_1 X1 X0) \wedge (v1_aff_1 X2 X0) \wedge (v1_aff_4 \\
& X3 X0) \wedge (v1_aff_4 X4 X0)))))) \Rightarrow ((r5_aff_1 X0 X1 X2) \vee (r1_aff_4 \\
& X0 X3 X4))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((r5_aff_1 X0 X2 X3) \wedge ((X1 \in \\
& X2) \wedge (X1 \in X3))) \Rightarrow (X2 = X3))))))
\end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& \quad (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& \quad (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& (((v1_aff_1 X1 X0) \wedge (v1_aff_1 X2 X0)) \Rightarrow ((r5_aff_1 X0 X1 X2) \Leftrightarrow (r1_aff_4 \\
& \quad X0 X1 X2))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& \quad (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& \quad (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& \quad (\forall X3.(m1_subset_1 X3 (u1_incsp_1 (k13_afproj X0))) \Rightarrow (\forall X4. \\
& (m1_subset_1 X4 (u2_incsp_1 (k13_afproj X0))) \Rightarrow (((X3 = k5_afproj \\
& X0 X1) \wedge ((X4 = k4_tarski (k6_afproj X0 X2) np_2) \wedge ((v1_aff_1 X1 X0) \wedge \\
& (v1_aff_4 X2 X0)))))) \Rightarrow ((r1_incsp_1 (k13_afproj X0) X3 X4) \Leftrightarrow (r1_aff_4 \\
& \quad X0 X1 X2))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& \quad (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& \quad (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& \quad (\forall X3.(m1_subset_1 X3 (u1_incsp_1 (k13_afproj X0))) \Rightarrow (\forall X4. \\
& (m1_subset_1 X4 (u2_incsp_1 (k13_afproj X0))) \Rightarrow (((X3 = k5_afproj \\
& X0 X1) \wedge ((k4_tarski X2 np_1 = X4) \wedge ((v1_aff_1 X1 X0) \wedge (v1_aff_1 X2 \\
& X0)))))) \Rightarrow ((r1_incsp_1 (k13_afproj X0) X3 X4) \Leftrightarrow (r1_aff_4 X0 X1 X2))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& \quad (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
& \quad X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 \\
& \quad X3 (u1_incsp_1 (k13_afproj X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& (u2_incsp_1 (k13_afproj X0))) \Rightarrow (\neg(X1 = X3) \wedge ((k4_tarski (k6_afproj \\
& X0 X2) np_2 = X4) \wedge (r1_incsp_1 (k13_afproj X0) X3 X4))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
& \quad X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 \\
& \quad X3 (u1_incsp_1 (k13_afproj X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& \quad (u2_incsp_1 (k13_afproj X0))) \Rightarrow (((X1 = X3) \wedge (k4_tarski X2 np_1 = \\
& X4)) \Rightarrow ((r1_incsp_1 (k13_afproj X0) X3 X4) \Leftrightarrow ((v1_aff_1 X2 X0) \wedge (X1 \in \\
& \quad X2)))))))))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u2_incsp_1 (k13_afproj X0))) \Leftrightarrow (\neg \\
& \quad \forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\\
& \quad (\neg(X1 = k4_tarski X2 np_1) \wedge (v1_aff_1 X2 X0)) \wedge (\neg(X1 = k4_tarski \\
& \quad (k6_afproj X0 X2) np_2) \wedge (v1_aff_4 X2 X0))))))
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_incsp_1 (k13_afproj X0))) \Leftrightarrow (\neg \\
& \quad (\neg m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\forall X2.(m1_subset_1 \\
& \quad X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg(X1 = k5_afproj X0 X2) \wedge (v1_aff_1 \\
& \quad X2 X0))))))
\end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
& \quad X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\
& \quad (u1_struct_0 X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 (k1_zfmisc_1 \\
& \quad (u1_struct_0 X0))) \Rightarrow (\neg(v1_aff_1 X3 X0) \wedge ((v1_aff_1 X4 X0) \wedge ((X1 \in \\
& X3) \wedge ((X2 \in X3) \wedge ((X1 \in X4) \wedge ((X2 \in X4) \wedge ((X1 \neq X2) \wedge (X3 \neq X4))))))))))))))
\end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& \quad (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& \quad (((v1_aff_4 X1 X0) \wedge (v1_aff_4 X2 X0)) \Rightarrow ((k6_afproj X0 X1 = k6_afproj \\
& \quad X0 X2) \Leftrightarrow (r1_aff_4 X0 X1 X2))))))
\end{aligned} \tag{12}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& \quad (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& \quad (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\
& \quad (((v1_aff_1 X1 X0) \wedge (v1_aff_1 X2 X0)) \Rightarrow ((k5_afproj X0 X1 = k5_afproj \\
& \quad \quad X0 X2) \Leftrightarrow (r5_aff_1 X0 X1 X2))))))
\end{aligned} \tag{13}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v7_struct_0 X0) \wedge ((v1_diraf X0) \wedge (l1_analoaf X0))) \Rightarrow \\
& \quad (\forall X1.(m1_subset_1 X1 (u1_incsp_1 (k13_afproj X0))) \Rightarrow (\forall X2. \\
& \quad (m1_subset_1 X2 (u1_incsp_1 (k13_afproj X0))) \Rightarrow (\forall X3.(m1_subset_1 \\
& \quad \quad X3 (u2_incsp_1 (k13_afproj X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& \quad \quad (u2_incsp_1 (k13_afproj X0))) \Rightarrow (\neg (r1_incsp_1 (k13_afproj X0) \\
& \quad \quad X1 X3) \wedge ((r1_incsp_1 (k13_afproj X0) X1 X4) \wedge ((r1_incsp_1 (k13_afproj \\
& \quad \quad X0) X2 X3) \wedge ((r1_incsp_1 (k13_afproj X0) X2 X4) \wedge ((X1 \neq X2) \wedge (X3 \neq X4))))))))))
\end{aligned}$$