

t14\_semi\_af1 (TMKgF-  
PMX5kB5ZNXQUdV77Px6ZhvB2tT3DaF)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_semi\_af1 : \iota \Rightarrow o$  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  $r2\_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v1\_semi\_af1 X0) \wedge (l1\_analoaf \\
& \quad X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\
& \quad (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 \\
& \quad (u1\_struct\_0 X0)) \Rightarrow ((r2\_analoaf X0 X1 X2 X1 X3) \Rightarrow ((r2\_analoaf X0 \\
& \quad X1 X3 X1 X2) \wedge ((r2\_analoaf X0 X2 X1 X1 X3) \wedge ((r2\_analoaf X0 X1 X2 X3 X1) \wedge \\
& \quad ((r2\_analoaf X0 X1 X3 X2 X1) \wedge ((r2\_analoaf X0 X2 X1 X3 X1) \wedge ((r2\_analoaf \\
& \quad X0 X3 X1 X1 X2) \wedge ((r2\_analoaf X0 X3 X1 X2 X1) \wedge ((r2\_analoaf X0 X2 X1 X2 \\
& \quad X3) \wedge ((r2\_analoaf X0 X1 X2 X2 X3) \wedge ((r2\_analoaf X0 X2 X1 X3 X2) \wedge ((r2\_analoaf \\
& \quad X0 X2 X3 X2 X1) \wedge ((r2\_analoaf X0 X1 X2 X3 X2) \wedge ((r2\_analoaf X0 X3 X2 X2 \\
& \quad X1) \wedge ((r2\_analoaf X0 X2 X3 X1 X2) \wedge ((r2\_analoaf X0 X3 X2 X1 X2) \wedge ((r2\_analoaf \\
& \quad X0 X3 X1 X3 X2) \wedge ((r2\_analoaf X0 X1 X3 X3 X2) \wedge ((r2\_analoaf X0 X3 X1 X2 \\
& \quad X3) \wedge ((r2\_analoaf X0 X1 X3 X2 X3) \wedge ((r2\_analoaf X0 X3 X2 X3 X1) \wedge ((r2\_analoaf \\
& \quad X0 X2 X3 X3 X1) \wedge ((r2\_analoaf X0 X3 X2 X1 X3) \wedge (r2\_analoaf X0 X2 X3 X1 \\
& \quad X3))))))))))))))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v1\_semi\_af1 X0) \wedge (l1\_analoaf \\
& \quad X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\
& \quad (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 \\
& \quad (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow \\
& \quad ((r2\_analoaf X0 X1 X2 X3 X4) \Rightarrow ((r2\_analoaf X0 X2 X1 X3 X4) \wedge ((r2\_analoaf \\
& \quad X0 X1 X2 X4 X3) \wedge ((r2\_analoaf X0 X2 X1 X4 X3) \wedge ((r2\_analoaf X0 X3 X4 X1 \\
& \quad X2) \wedge ((r2\_analoaf X0 X4 X3 X1 X2) \wedge ((r2\_analoaf X0 X3 X4 X2 X1) \wedge (r2\_analoaf \\
& \quad X0 X4 X3 X2 X1))))))))))
\end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v1\_semi\_af1 X0) \wedge (l1\_analoaf \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 \\ & (u1\_struct\_0 X0)) \Rightarrow ((\neg r2\_analoaf X0 X1 X2 X1 X3) \Rightarrow ((\neg r2\_analoaf \\ & X0 X1 X2 X3 X1) \wedge ((\neg r2\_analoaf X0 X2 X1 X1 X3) \wedge ((\neg r2\_analoaf X0 X2 X1 \\ & X3 X1) \wedge ((\neg r2\_analoaf X0 X1 X3 X1 X2) \wedge ((\neg r2\_analoaf X0 X1 X3 X2 X1) \wedge \\ & ((\neg r2\_analoaf X0 X3 X1 X1 X2) \wedge ((\neg r2\_analoaf X0 X3 X1 X2 X1) \wedge ((\neg r2\_analoaf \\ & X0 X2 X1 X2 X3) \wedge ((\neg r2\_analoaf X0 X2 X1 X3 X2) \wedge ((\neg r2\_analoaf X0 X1 X2 \\ & X2 X3) \wedge ((\neg r2\_analoaf X0 X1 X2 X3 X2) \wedge ((\neg r2\_analoaf X0 X2 X3 X2 X1) \wedge \\ & ((\neg r2\_analoaf X0 X2 X3 X1 X2) \wedge ((\neg r2\_analoaf X0 X3 X2 X1 X2) \wedge ((\neg r2\_analoaf \\ & X0 X3 X2 X2 X1) \wedge ((\neg r2\_analoaf X0 X3 X2 X3 X1) \wedge ((\neg r2\_analoaf X0 X3 X2 \\ & X1 X3) \wedge ((\neg r2\_analoaf X0 X2 X3 X3 X1) \wedge ((\neg r2\_analoaf X0 X2 X3 X1 X3) \wedge \\ & ((\neg r2\_analoaf X0 X3 X1 X3 X2) \wedge ((\neg r2\_analoaf X0 X3 X1 X2 X3) \wedge ((\neg r2\_analoaf \\ & X0 X1 X3 X2 X3) \wedge ((\neg r2\_analoaf X0 X1 X3 X3 X2)))))))))))))))))))))) \end{aligned}$$