

## l4\_aff\_1

(TMX6VbvRFBf3xGTDY5JMyft5e6LoBcRqHpD)

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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  $r2\_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
 & \quad ((\neg \forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \forall X2. \\
 & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (X1 = X2))) \wedge ((\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 \\
 & ((r2\_analoaf X0 X1 X2 X2 X1) \wedge ((r2\_analoaf X0 X1 X2 X3 X3) \wedge (((r2\_analoaf \\
 & X0 X1 X2 X3 X4) \wedge (r2\_analoaf X0 X1 X2 X5 X6)) \Rightarrow ((X1 = X2) \vee (r2\_analoaf \\
 & X0 X3 X4 X5 X6)))) \wedge ((r2\_analoaf X0 X1 X2 X1 X3) \Rightarrow (r2\_analoaf X0 X2 X1 \\
 & X2 X3))))))))) \wedge ((\neg \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 (r2\_analoaf X0 X1 X2 X1 X3)))) \wedge \\
 & ((\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 (\exists X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \wedge \\
 & ((r2\_analoaf X0 X1 X3 X2 X4) \wedge (X2 \neq X4)))))) \wedge ((\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 (\exists X4. \\
 & (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \wedge ((r2\_analoaf X0 X1 X2 X3 X4) \wedge \\
 & (r2\_analoaf X0 X1 X3 X2 X4)))))) \wedge ((\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 (\neg (r2\_analoaf X0 X3 X1 X1 X4) \wedge ((X1 \neq X3) \wedge (\forall X5. \\
 & (m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow (\neg (r2\_analoaf X0 X2 X1 X1 X5) \wedge \\
 & (r2\_analoaf X0 X2 X3 X4 X5)))))))))))))
 \end{aligned}$$

(1)

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & \quad X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow ((r2\_analoaf \\ & \quad X0 X1 X2 X3 X4) \Rightarrow (r2\_analoaf X0 X3 X4 X1 X2)))))) \end{aligned}$$