

## t43\_aff\_1

(TMUH2kDPw5NdvxS9WB7rqFUudUfYGHcPr7u)

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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  $r2\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r5\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_aff\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
 & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
 & X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
 & X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5. \\
 & (m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow (\forall X6.(m1\_subset\_1 X6 \\
 & (u1\_struct\_0 X0)) \Rightarrow (\neg(X1 \neq X2) \wedge ((\neg(\neg(r2\_analoaf X0 X1 X2 X3 X4) \wedge \\
 & (r2\_analoaf X0 X1 X2 X5 X6)) \wedge ((\neg(r2\_analoaf X0 X1 X2 X3 X4) \wedge (r2\_analoaf \\
 & X0 X5 X6 X1 X2)) \wedge ((\neg(r2\_analoaf X0 X3 X4 X1 X2) \wedge (r2\_analoaf X0 X5 X6 \\
 & X1 X2)) \wedge (\neg(r2\_analoaf X0 X3 X4 X1 X2) \wedge (r2\_analoaf X0 X1 X2 X5 X6)))))) \wedge \\
 & (\neg r2\_analoaf X0 X3 X4 X5 X6))))))))) \wedge
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
 & (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\
 & (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\
 & ((r3\_aff\_1 X0 X1 X2) \Leftrightarrow (\exists X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
 & X0)) \wedge (\exists X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \wedge (\exists X5. \\
 & (m1\_subset\_1 X5 (u1\_struct\_0 X0)) \wedge (\exists X6.(m1\_subset\_1 X6 \\
 & (u1\_struct\_0 X0)) \wedge ((X3 \neq X4) \wedge ((X5 \neq X6) \wedge ((r2\_analoaf X0 X3 X4 X5 \\
 & X6) \wedge ((X1 = k2\_aff\_1 X0 X3 X4) \wedge (X2 = k2\_aff\_1 X0 X5 X6)))))))))) \wedge
 \end{aligned}
 \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
 & (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\
 & (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\
 & ((r3\_aff\_1 X0 X1 X2) \Rightarrow ((v1\_aff\_1 X1 X0) \wedge (v1\_aff\_1 X2 X0))))))
 \end{aligned}
 \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5. \\
& (m1\_subset\_1 X5 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (((X1 \in X5) \wedge \\
& (X2 \in X5) \wedge (v1\_aff\_1 X5 X0)) \Rightarrow ((X1 = X2) \vee ((r2\_aff\_1 X0 X3 X4 X5) \Leftrightarrow ( \\
& r2\_analoaf X0 X3 X4 X1 X2))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& X2 (u1\_struct\_0 X0)) \Rightarrow ((X1 \in k2\_aff\_1 X0 X1 X2) \wedge (X2 \in k2\_aff\_1 X0 X1 \\
& X2))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf \\
& X0) \wedge (l1\_analoaf X0))) \wedge ((m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& X0))) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Rightarrow ((r5\_aff\_1 \\
& X0 X1 X2) \Leftrightarrow (r3\_aff\_1 X0 X1 X2))
\end{aligned} \tag{6}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
& (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 \\
& (u1\_struct\_0 X0))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (k1\_zfmisc\_1 \\
& (u1\_struct\_0 X0))) \Rightarrow (((r2\_aff\_1 X0 X1 X2 X3) \wedge (r5\_aff\_1 X0 X3 X4)) \Rightarrow \\
& (r2\_aff\_1 X0 X1 X2 X4))))))
\end{aligned}$$