

# t10\_aff\_4 (TMVGp- WUMS7syKKQUYivBcXaf1si6ETk4hJk)

October 27, 2020

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  $r5\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_aff\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ & X0)) \Rightarrow ((r1\_aff\_1 X0 X1 X2 X3) \Rightarrow ((r1\_aff\_1 X0 X1 X3 X2) \wedge ((r1\_aff\_1 \\ & X0 X2 X1 X3) \wedge ((r1\_aff\_1 X0 X2 X3 X1) \wedge ((r1\_aff\_1 X0 X3 X1 X2) \wedge (r1\_aff\_1 \\ & X0 X3 X2 X1)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow ((r2\_analoaf \\ & X0 X1 X2 X3 X4) \Rightarrow ((r2\_analoaf X0 X1 X2 X4 X3) \wedge ((r2\_analoaf X0 X2 X1 X3 \\ & X4) \wedge ((r2\_analoaf X0 X2 X1 X4 X3) \wedge ((r2\_analoaf X0 X3 X4 X1 X2) \wedge ((r2\_analoaf \\ & X0 X3 X4 X2 X1) \wedge ((r2\_analoaf X0 X4 X3 X1 X2) \wedge (r2\_analoaf X0 X4 X3 X2 \\ & X1)))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X3.(m1\_subset\_1 \\ & X3 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (((r5\_aff\_1 X0 X2 X3) \wedge ((X1 \in \\ & X2) \wedge (X1 \in X3))) \Rightarrow (X2 = X3)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
& \quad (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\
& \quad (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\
& \quad ((r3\_aff\_1 X0 X1 X2) \Rightarrow ((v1\_aff\_1 X1 X0) \wedge (v1\_aff\_1 X2 X0)))))) \Rightarrow
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
& \quad (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& \quad X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
& \quad X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\
& \quad (((v1\_aff\_1 X4 X0) \wedge ((X1 \in X4) \wedge ((X2 \in X4) \wedge (r1\_aff\_1 X0 X1 X2 X3)))) \Rightarrow \\
& \quad ((X1 = X2) \vee (X3 \in X4)))))) \Rightarrow
\end{aligned} \tag{5}$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
& \quad (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& \quad X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
& \quad X0)) \Rightarrow ((r1\_aff\_1 X0 X1 X2 X3) \Leftrightarrow (r2\_analoaf X0 X1 X2 X1 X3)))))) \Rightarrow
\end{aligned} \tag{7}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
& \quad (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& \quad X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
& \quad X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5. \\
& \quad (m1\_subset\_1 X5 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X6. \\
& \quad (m1\_subset\_1 X6 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (((X1 \in X5) \wedge \\
& \quad (X2 \in X6) \wedge ((X3 \in X6) \wedge (X1 = X4)))) \Rightarrow (((\neg r5\_aff\_1 X0 X5 X6) \wedge (\neg r5\_aff\_1 \\
& \quad X0 X6 X5)) \vee ((X5 = X6) \vee (((\neg r2\_analoaf X0 X1 X2 X4 X3) \wedge (\neg r2\_analoaf \\
& \quad X0 X2 X1 X3 X4)) \vee (X2 = X3)))))))))) \Rightarrow
\end{aligned}$$