

t31\_afproj  
(TMXh2n384EY2o55Ekj933jichTn9kHNU8oE)

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  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  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  $v1\_aff\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_aff\_4 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  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  $r1\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_aff\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\ & \quad (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ & \quad (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ & \quad (((v1\_aff\_1 X1 X0) \wedge ((v1\_aff\_4 X2 X0) \wedge (r1\_tarski X1 X2))) \Rightarrow (r1\_aff\_4 \\ & \quad \quad X0 X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\ & \quad (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ & \quad (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ & \quad (\forall X3.(m1\_subset\_1 X3 (u1\_incsp\_1 (k13\_afproj X0))) \Rightarrow (\forall X4. \\ & \quad (m1\_subset\_1 X4 (u2\_incsp\_1 (k13\_afproj X0))) \Rightarrow (((X3 = k5\_afproj \\ & \quad X0 X1) \wedge ((X4 = k4\_tarski (k6\_afproj X0 X2) np\_2) \wedge ((v1\_aff\_1 X1 X0) \wedge \\ & \quad (v1\_aff\_4 X2 X0)))) \Rightarrow ((r1\_incsp\_1 (k13\_afproj X0) X3 X4) \Leftrightarrow (r1\_aff\_4 \\ & \quad \quad X0 X1 X2)))))))))) \end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ & (\forall X3.(m1\_subset\_1 X3 (u1\_incsp\_1 (k13\_afproj X0))) \Rightarrow (\forall X4. \\ & (m1\_subset\_1 X4 (u2\_incsp\_1 (k13\_afproj X0))) \Rightarrow (((v1\_aff\_1 X1 \\ X0) \wedge ((v1\_aff\_4 X2 X0) \wedge ((r1\_tarski X1 X2) \wedge ((X3 = k5\_afproj X0 X1) \wedge \\ (X4 = k4\_tarski (k6\_afproj X0 X2) np\_2)))))) \Rightarrow (r1\_incsp\_1 (k13\_afproj \\ X0) X3 X4)))))) \end{aligned}$$