

# t24\_afproj (TMKgRswYA- jkZRAN3wDGgvEPEvWvjUmdPCo4)

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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  $u2\_incsp\_1 : \iota \Rightarrow \iota$  be given. Let  $k14\_afproj : \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k6\_afproj : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_aff\_4 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k8\_afproj : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $g1\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_afproj : \iota \Rightarrow \iota$  be given. Let  $k12\_afproj : \iota \Rightarrow \iota$  be given. Let  $v1\_incsp\_1 : \iota \Rightarrow o$  be given. Let  $l1\_incsp\_1 : \iota \Rightarrow o$  be given. Let  $u1\_incsp\_1 : \iota \Rightarrow \iota$  be given. Let  $u3\_incsp\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\ (\forall X1. (X1 \in k8\_afproj X0) \Leftrightarrow (\exists X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0))) \wedge ((X1 = k6\_afproj X0 X2) \wedge (v1\_aff\_4 X2 X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 \\ X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))) \Rightarrow (\forall X3. \\ \forall X4. \forall X5. (g1\_incsp\_1 X0 X1 X2 = g1\_incsp\_1 X3 X4 X5) \Rightarrow \\ ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = X5)))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow (\neg v1\_xboole\_0 (k8\_afproj X0)) \quad (5)$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow (\neg v1\_xboole\_0 (k7\_afproj X0)) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow (m1\_subset\_1 (k12\_afproj X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k7\_afproj X0) (k8\_afproj X0)))) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))) \Rightarrow ((v1\_incsp\_1 (g1\_incsp\_1 X0 X1 X2)) \wedge (l1\_incsp\_1 (g1\_incsp\_1 X0 X1 X2))) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow (k14\_afproj X0 = g1\_incsp\_1 (k7\_afproj X0) (k8\_afproj X0) (k12\_afproj X0)) \quad (9)$$

Assume the following.

$$\forall X0. (l1\_incsp\_1 X0) \Rightarrow ((v1\_incsp\_1 X0) \Rightarrow (X0 = g1\_incsp\_1 (u1\_incsp\_1 X0) (u2\_incsp\_1 X0) (u3\_incsp\_1 X0))) \quad (10)$$

**Theorem 1**

$$\forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u2\_incsp\_1 (k14\_afproj X0))) \Leftrightarrow (\exists X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \wedge ((X1 = k6\_afproj X0 X2) \wedge (v1\_aff\_4 X2 X0))))$$