

# t15\_flang\_2 (TMMvC- qmkzMDXgLqx A7rrVEG11B8A9tJueiF)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k8\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_flang\_1 : \iota \Rightarrow \iota$  be given. Let  $k8\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_catalan2 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k8\_afinsq\_1 X1))) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (k8\_afinsq\_1 X1))) \Rightarrow (\neg((X0 \in X2) \vee (X0 \in X3)) \wedge ((X0 \neq k2\_flang\_1 X1) \wedge \\ & (k6\_flang\_1 X1 X2 X3 = k4\_flang\_1 X1 (k2\_flang\_1 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k3\_catalan2 X0))) \Rightarrow (((X1 \in k6\_flang\_1 X0 (k8\_flang\_1 X0 X2) X2) \vee \\ & (X1 \in k6\_flang\_1 X0 X2 (k8\_flang\_1 X0 X2))) \Rightarrow (X1 \in k8\_flang\_1 X0 X2)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k3\_catalan2 \\ & X0))) \Rightarrow ((k6\_flang\_1 X0 X1 (k4\_flang\_1 X0 (k2\_flang\_1 X0)) = X1) \wedge \\ & (k6\_flang\_1 X0 (k4\_flang\_1 X0 (k2\_flang\_1 X0)) X1 = X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. k3\_catalan2 X0 = k8\_afinsq\_1 X0 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k3\_catalan2 \\ & X0))) \Rightarrow (m1\_subset\_1 (k8\_flang\_1 X0 X1) (k1\_zfmisc\_1 (k3\_catalan2 \\ & X0))) \end{aligned} \quad (5)$$

**Theorem 1**

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k8\_afinsq\_1 X1)))\Rightarrow(\neg(X0 \in X2)\wedge((X0\neq k2\_flang\_1 X1)\wedge(k8\_flang\_1 X1 X2 = k4\_flang\_1 X1 (k2\_flang\_1 X1))))$$