t6_flang_2 (TMFmgXaZFZrPtMph-WuGjynbHYW8sU1sFGeR)

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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 $k5\_afinsq\_1 : \iota \Rightarrow \iota$ be given. Let $k6\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_flang\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_catalan2 : \iota \Rightarrow \iota$ be given. Let $k1\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k3\_catalan2\ X1)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k3\_catalan2\ X1)) \Rightarrow ((k1\_flang\_1\ X1\ X2\ X3 = k5\_afinsq\_1\ X0) \Leftrightarrow (((X2 = k2\_flang\_1\ X1) \wedge (X3 = k5\_afinsq\_1\ X0)) \vee ((X3 = k2\_flang\_1\ X1) \wedge (X2 = k5\_afinsq\_1\ X0))))) \tag{2}$$

Assume the following.

$$\forall X0.k3\_catalan2\ X0 = k8\_afinsq\_1\ X0 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k3\_catalan2\ X0))) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k3\_catalan2\ X0)))) \Rightarrow (m1\_subset\_1\ (k6\_flang\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k3\_catalan2\ X0))) \tag{4}$$

Assume the following.

$$\forall X0.m1\_subset\_1\ (k2\_flang\_1\ X0)\ (k3\_catalan2\ X0) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k3\_catalan2\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k3\_catalan2\ X0)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k3\_catalan2\ X0)))\Rightarrow((X3 = k6\_flang\_1\ X0\ X1\ X2)\Leftrightarrow(\forall X4.(X4 \in X3)\Leftrightarrow(\exists X5.(m1\_subset\_1\ X5\ (k3\_catalan2\ X0))\wedge(\exists X6.(m1\_subset\_1\ X6\ (k3\_catalan2\ X0))\wedge((X5 \in X1)\wedge((X6 \in X2)\wedge(X4 = k1\_flang\_1\ X0\ X5\ X6)))))))))) \tag{6}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X1)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X1)))\Rightarrow((k5\_afinsq\_1\ X0 \in k6\_flang\_1\ X1\ X2\ X3)\Leftrightarrow(((k2\_flang\_1\ X1 \in X2)\wedge(k5\_afinsq\_1\ X0 \in X3))\vee((k5\_afinsq\_1\ X0 \in X2)\wedge(k2\_flang\_1\ X1 \in X3)))))$$