

## t23\_flang\_1

(TMc8Ym5pREL5WfXyoFa92QTYEzzHZHgnYme)

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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  $k3\_catalan2 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k7\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k6\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k9\_setfam\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k4\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_flang\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0\ np\_1) \wedge (m2\_subset\_1\ np\_1\ k1\_numbers\ k5\_numbers)) \wedge \\ & ((m1\_subset\_1\ np\_1\ k5\_numbers) \wedge (m1\_subset\_1\ np\_1\ k1\_numbers)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. k9\_setfam\_1\ X0 = k1\_zfmisc\_1\ X0 \quad (2)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v7\_ordinal1\ X0) \wedge (v7\_ordinal1\ X1)) \Rightarrow (v7\_ordinal1\ (k2\_xcmplx\_0\ X0\ X1)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ & (k3\_catalan2\ X0))) \wedge (v7\_ordinal1\ X2)) \Rightarrow (m1\_subset\_1\ (k7\_flang\_1 \\ & X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k3\_catalan2\ X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2 \\ & X1\ k5\_numbers\ (k9\_setfam\_1\ X0)) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ X0)))))) \wedge (v7\_ordinal1 \\ & X2)) \Rightarrow (m1\_subset\_1\ (k5\_flang\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k3\_catalan2 \\
& X0))) \Rightarrow (\forall X2.(v7\_ordinal1 X2) \Rightarrow (\forall X3.(m1\_subset\_1 \\
& X3 (k1\_zfmisc\_1 (k3\_catalan2 X0))) \Rightarrow ((X3 = k7\_flang\_1 X0 X1 X2) \Leftrightarrow \\
& (\exists X4.((v1\_funct\_1 X4) \wedge ((v1\_funct\_2 X4 k5\_numbers (k9\_setfam\_1 \\
& (k3\_catalan2 X0))) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& k5\_numbers (k9\_setfam\_1 (k3\_catalan2 X0)))))) \wedge ((X3 = k5\_flang\_1 \\
& (k3\_catalan2 X0) X4 X2) \wedge ((k5\_flang\_1 (k3\_catalan2 X0) X4 k6\_numbers = \\
& k4\_flang\_1 X0 (k2\_flang\_1 X0)) \wedge (\forall X5.(v7\_ordinal1 X5) \Rightarrow \\
& (k5\_flang\_1 (k3\_catalan2 X0) X4 (k2\_xcmplx\_0 X5 np\_1) = k6\_flang\_1 \\
& X0 (k5\_flang\_1 (k3\_catalan2 X0) X4 X5) X1)))))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \tag{8}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k3\_catalan2 \\
& X0))) \Rightarrow (\forall X2.(v7\_ordinal1 X2) \Rightarrow (k7\_flang\_1 X0 X1 (k2\_xcmplx\_0 \\
& X2 np\_1) = k6\_flang\_1 X0 (k7\_flang\_1 X0 X1 X2) X1))
\end{aligned}$$