t38_flang_2 (TMN9iQWK79EFpsxWpMm1oheL42v5oGAumQx)

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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 $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k1\_flang\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_catalan2 : \iota \Rightarrow \iota$ be given. Let $k7\_flang\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k6\_numbers : \iota$ 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 $k4\_ordinal1 : \iota$ be given. Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow (\forall X2.(v1\_xreal\_0\ X2) \Rightarrow (\forall X3.(v1\_xreal\_0\ X3) \Rightarrow (\neg(\neg r1\_xxreal\_0\ X1\ X0) \wedge ((r1\_xxreal\_0\ X2\ X3) \wedge (r1\_xxreal\_0\ (k2\_xcmplx\_0\ X1\ X3)\ (k2\_xcmplx\_0\ X0\ X2)))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0))) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow (\forall X3.(v7\_ordinal1\ X3) \Rightarrow (\forall X4.(v7\_ordinal1\ X4) \Rightarrow (\forall X5.(v7\_ordinal1\ X5) \Rightarrow (((r1\_xxreal\_0\ X2\ X3) \wedge (r1\_xxreal\_0\ X4\ X5)) \Rightarrow (k6\_flang\_1\ X0\ (k1\_flang\_2\ X0\ X1\ X2\ X3)\ (k1\_flang\_2\ X0\ X1\ X4\ X5) = k1\_flang\_2\ X0\ X1\ (k2\_xcmplx\_0\ X2\ X4)\ (k2\_xcmplx\_0\ X3\ X5))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k3\_catalan2\ X0))) \Rightarrow (k7\_flang\_1\ X0\ X1\ np\_\_1 = X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0))) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow (k1\_flang\_2\ X0\ X1\ X2\ X2 = k7\_flang\_1\ X0\ X1\ X2)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0)))\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(\forall X3.(v7\_ordinal1\ X3)\Rightarrow((k1\_flang\_2\ X0\ X1\ X2\ X3 = k1\_xboole\_0)\Leftrightarrow(\neg(r1\_xxreal\_0\ X2\ X3)\wedge(\neg(\neg r1\_xxreal\_0\ X2\ k6\_numbers)\wedge(X1 = k1\_xboole\_0))))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k3\_catalan2\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k3\_catalan2\ X0)))\Rightarrow((k6\_flang\_1\ X0\ X1\ X2 = k1\_xboole\_0)\Leftrightarrow((X1 = k1\_xboole\_0)\vee(X2 = k1\_xboole\_0)))) \tag{6}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{7}$$

Assume the following.

$$r1\_xxreal\_0\ np\_\_1\ np\_\_1 \tag{8}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{9}$$

Assume the following.

$$\forall X0.k3\_catalan2\ X0 = k8\_afinsq\_1\ X0 \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(v7\_ordinal1\ (k2\_xcmplx\_0\ X0\ X1)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0)))\wedge((v7\_ordinal1\ X2)\wedge(v7\_ordinal1\ X3)))\Rightarrow(m1\_subset\_1\ (k1\_flang\_2\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0))) \tag{12}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{13}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xreal\_0\ X0) \tag{14}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \tag{15}$$

Theorem 1

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k8\_afinsq\_1\ X0)))\Rightarrow(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(\forall X3.(v7\_ordinal1\ X3)\Rightarrow(k1\_flang\_2\ X0\ X1\ (k2\_xcmplx\_0\ X2\ np\_\_1)\ (k2\_xcmplx\_0\ X3\ np\_\_1) = k6\_flang\_1\ X0\ (k1\_flang\_2\ X0\ X1\ X2\ X3)\ X1)))$$