t15_fintopo2 (TMVnWytHqB-vuYyu9KPSrZYPRyMeXK7bpFAf)

October 27, 2020

Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_fintopo2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_margrel1 : \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_fintopo2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_margrel1 : \iota$ be given. Let $k1\_xboolean : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_orders\_2\ X0)) \Rightarrow (\forall X1.\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow ((k4\_fintopo2\ X0\ X1\ X2 = k8\_margrel1) \Leftrightarrow (X1 \in X2)))) \tag{2}$$

Assume the following.

$$k7\_margrel1 = k1\_xboolean \tag{3}$$

Assume the following.

$$\exists X0.v1\_xboole\_0\ X0 \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_orders\_2\ X0)) \Rightarrow (\forall X1.\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (((X1 = X2) \Rightarrow (k5\_fintopo2\ X0\ X1\ X2 = k8\_margrel1)) \wedge ((X1 \neq X2) \Rightarrow (k5\_fintopo2\ X0\ X1\ X2 = k7\_margrel1))))) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_orders\_2\ X0)) \Rightarrow (\forall X1.\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (((X1 \in X2) \Rightarrow (k4\_fintopo2\ X0\ X1\ X2 = k8\_margrel1)) \wedge ((\neg X1 \in X2) \Rightarrow (k4\_fintopo2\ X0\ X1\ X2 = k7\_margrel1))))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Leftrightarrow(\forall X1.\neg X1 \in X0) \tag{8}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((k5\_fintopo2\ X0\ X1\ X2 = k8\_margrel1)\Leftrightarrow(X1 = X2))))$$