t33_pcomps_1 (TMc77jCv97FKpasy5eKbkAs41VGCQjVmMsq)

October 27, 2020

Let $l1\_metric\_1 : \iota \Rightarrow o$ be given. Let $v2\_pre\_topc : \iota \Rightarrow o$ be given. Let $g1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_pcomps\_1 : \iota \Rightarrow \iota$ be given. Let $l1\_pre\_topc : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_pre\_topc : \iota \Rightarrow o$ be given. Let $u1\_pre\_topc : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(l1\_metric\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow ((r1\_tarski\ X1\ (k2\_pcomps\_1\ X0)) \Rightarrow (k5\_setfam\_1\ (u1\_struct\_0\ X0)\ X1 \in k2\_pcomps\_1\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.(l1\_metric\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (((X1 \in k2\_pcomps\_1\ X0) \wedge (X2 \in k2\_pcomps\_1\ X0)) \Rightarrow (k9\_subset\_1\ (u1\_struct\_0\ X0)\ X1\ X2 \in k2\_pcomps\_1\ X0)))) \tag{2}$$

Assume the following.

$$\forall X0.(l1\_metric\_1\ X0) \Rightarrow (u1\_struct\_0\ X0 \in k2\_pcomps\_1\ X0) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0))) \Rightarrow (\forall X2.\forall X3.(g1\_pre\_topc\ X0\ X1 = g1\_pre\_topc\ X2\ X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_metric\_1\ X0) \Rightarrow (m1\_subset\_1\ (k2\_pcomps\_1\ X0)\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)))\Rightarrow((v1\_pre\_topc\ (g1\_pre\_topc\ X0\ X1))\wedge(l1\_pre\_topc\ (g1\_pre\_topc\ X0\ X1))) \tag{6}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow((v2\_pre\_topc\ X0)\Leftrightarrow((u1\_struct\_0\ X0\in u1\_pre\_topc\ X0)\wedge((\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))\Rightarrow((r1\_tarski\ X1\ (u1\_pre\_topc\ X0))\Rightarrow(k5\_setfam\_1\ (u1\_struct\_0\ X0)\ X1\in u1\_pre\_topc\ X0)))\wedge(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(((X1\in u1\_pre\_topc\ X0)\wedge(X2\in u1\_pre\_topc\ X0))\Rightarrow(k9\_subset\_1\ (u1\_struct\_0\ X0)\ X1\ X2\in u1\_pre\_topc\ X0))))))) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow((v1\_pre\_topc\ X0)\Rightarrow(X0=g1\_pre\_topc\ (u1\_struct\_0\ X0)\ (u1\_pre\_topc\ X0))) \tag{8}$$

Theorem 1

$$\forall X0.(l1\_metric\_1\ X0)\Rightarrow((v2\_pre\_topc\ (g1\_pre\_topc\ (u1\_struct\_0\ X0)\ (k2\_pcomps\_1\ X0)))\wedge(l1\_pre\_topc\ (g1\_pre\_topc\ (u1\_struct\_0\ X0)\ (k2\_pcomps\_1\ X0))))$$