

t22_fintopo2 (TMbtksv- zLR9RVTH6YhuqiJ6bJSQNxKMsFEy)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_fintopo2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k11_fintopo2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_fintopo2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_fintopo2 X0)) \Rightarrow (\forall X1. \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (k11_fintopo2 \\
 & X0 X1 = ReplSep (toset (\lambda X2 : \iota. m1_subset_1 X2 (u1_struct_0 \\
 & X0))) (\lambda X2 : \iota. (X2 \in X1) \wedge (\exists X3. (m1_subset_1 X3 (k1_zfmisc_1 \\
 & (u1_struct_0 X0)))) \wedge ((X3 \in k6_fintopo2 X0 X2) \wedge (r1_xboole_0 (k7_subset_1 \\
 & (u1_struct_0 X0) X3 (k6_domain_1 (u1_struct_0 X0) X2)) X1)))) (\lambda X2 : \iota. X2)))
 \end{aligned} \tag{1}$$

Theorem 1

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_fintopo2 X0)) \Rightarrow (\forall X1. \\
 & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\
 & (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((X1 \in k11_fintopo2 X0 X2) \Leftrightarrow ((\\
 & X1 \in X2) \wedge (\exists X3. (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\
 & X0)))) \wedge ((X3 \in k6_fintopo2 X0 X1) \wedge (r1_xboole_0 (k7_subset_1 (u1_struct_0 \\
 & X0) X3 (k6_domain_1 (u1_struct_0 X0) X1)) X2))))))
 \end{aligned}$$