

t11_fin_topo (TMYfa- JMBfKZ6WbSYaNTdWgbhxX12JuLdxYX)

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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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k12_fin_topo : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_fin_topo : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (k12_fin_topo \\ & X0 X1 = ReplSep (toset (\lambda X2 : \iota. m1_subset_1 X2 (u1_struct_0 \\ & X0)))) (\lambda X2 : \iota. \exists X3. (m1_subset_1 X3 (u1_struct_0 X0)) \wedge \\ & ((X3 \in X1) \wedge (X2 \in k1_fin_topo X0 X3))) (\lambda X2 : \iota. X2))) \quad (2) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ & (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((X1 \in k12_fin_topo X0 X2) \Leftrightarrow (\exists X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \wedge ((X3 \in X2) \wedge (X1 \in k1_fin_topo \\ & X0 X3)))))) \end{aligned}$$