

t32_fintopo6

(TMXN3zFMzTGxch4TzLakHnVEgG5yzzgkaRxs)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v1_fintopo6 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v3_fin_topo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_fintopo4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_fintopo6 \\ & X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & (\neg(k2_struct_0 X0 = k4_subset_1 (u1_struct_0 X0) X1 X2) \wedge ((r1_xboole_0 \\ & X1 X2) \wedge (r1_fintopo4 X0 X1 X2) \wedge ((X1 \neq k1_struct_0 X0) \wedge (X2 \neq k1_struct_0 \\ & X0)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((v3_fin_topo \\ & X1 X0) \wedge ((v3_fin_topo X2 X0) \wedge (r1_xboole_0 X1 X2))) \Rightarrow (r1_fintopo4 \\ & X0 X1 X2)))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow ((v1_fintopo6 \\ & X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & (\neg(k2_struct_0 X0 = k4_subset_1 (u1_struct_0 X0) X1 X2) \wedge ((X1 \neq k1_struct_0 \\ & X0) \wedge ((X2 \neq k1_struct_0 X0) \wedge ((v3_fin_topo X1 X0) \wedge ((v3_fin_topo \\ & X2 X0) \wedge (r1_xboole_0 X1 X2)))))))))) \end{aligned}$$