

t10_fintopo6
(TMHiSZdi5afVM44UH2XaSk57PupN11Uf2PH)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_fintopo6 : \iota \Rightarrow \iota \Rightarrow o$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_fin_topo : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (m1_fintopo6 X1 X0) \Rightarrow (l1_orders_2 X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (l1_orders_2 X1) \Rightarrow ((\\ m1_fintopo6 X1 X0) \Leftrightarrow ((r1_tarski (u1_struct_0 X1) (u1_struct_0 \\ X0)) \wedge (\forall X2. (m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow ((X2 \in u1_struct_0 \\ X1) \Rightarrow (k1_fin_topo X1 X2 = k3_xboole_0 (k9_relat_1 (u1_orders_2 \\ X0) X2) (u1_struct_0 X1))))))) \quad (4) \end{aligned}$$

Theorem 1

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ (m1_fintopo6 X1 X0) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 X1))) \Rightarrow (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ X0)))))) \end{aligned}$$